

Flight, August 3, 1912.

FLIGHT

First Aero Weekly in the World.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

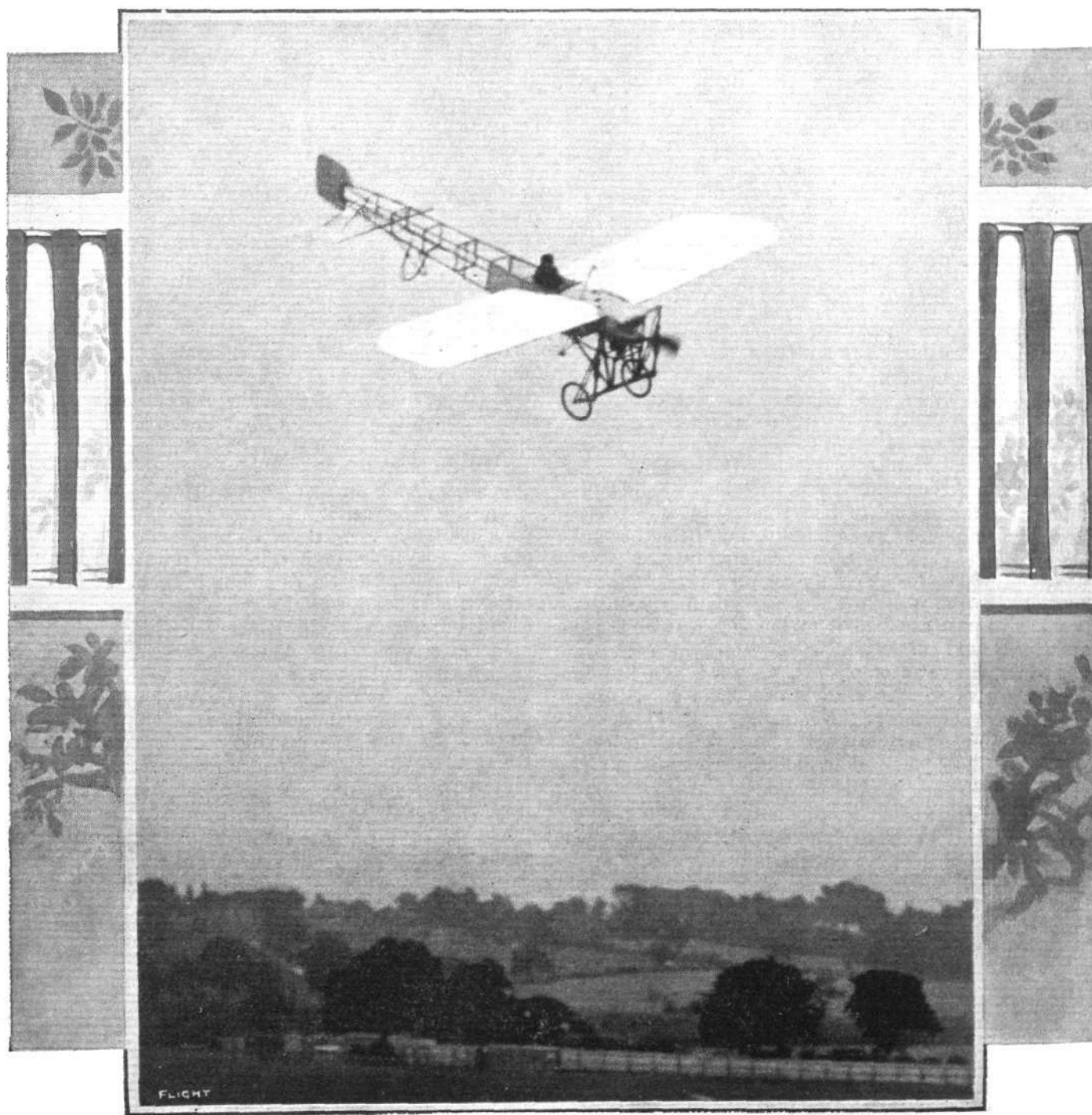
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AUGUST 3, 1912.

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Mr. Gustav Hamel executing one of his very impressive *vol planés* at Hendon.

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EDITORIAL COMMENT.

The War Office Trials.

Assuming the weather conditions to be favourable, the early part of next week will see the actual commencement of the War Office Trials which have been so eagerly looked forward to by the world of aviation. Whatever we may have had in mind in criticism of the Trials and the conditions under which they are to be conducted has been said long since, so that nothing remains but to generalise until such time as the results of the tests themselves are available for the intelligent student of flight to read their lessons for his own benefit and for that, we hope, of the future of British aviation.

To begin with, the Trials have attracted a larger and much more representative entry than at one time many believed they would do. At that we are genuinely pleased, because it would from many points of view have been a very great pity if the Trials had carried with them even the merest suspicion of the feeling that the conditions had been so formulated as to make them impossible for the moderately cautious constructor to enter. As we have so often pointed out in these pages, it is absolutely essential for the future of the movement and particularly that public opinion should be worked up to the necessary pitch for insisting that our aerial defences should be put on a basis at least comparable to that of our possible rivals. Now, we can quite conceive that if for any reason constructors had refrained from entering their machines, the man in the street would have put the worst interpretation upon their abstinence. It may be difficult for those who are on the inside of things to realise that even now that more or less nebulous person—we say nebulous, because we have never yet heard a convincing definition of exactly who and what constitutes “the man in the street”—does not altogether believe in the practical possibilities of flight. It still remains to him something of a *terra incognita*—something very wonderful, but, being beyond his ken, something unpractical. Therefore, the effect of anything even approaching a *fasco* must have produced a very adverse effect, for the public would have been very likely to have ascribed it to the fact that while the aeroplane is undoubtedly a machine on which certain circus tricks can be accomplished, when it is asked to do the serious work which its advocates claim it as being able to do it says in effect: “No, thank you.” However, there is not the slightest fear of that, and we look forward to some extremely practical and interesting performances during the course of the Trials.

Coming from the general to the particular, we are more than pleased at the very satisfactory entry of British-built machines. That there are so many entered and, what is better, so many actually present to take part in the very drastic tests laid down by the War Office authorities, is somewhat more than gratifying. Especially is this so when we recollect that in no country in Europe has less official encouragement been given in the earlier days to the pioneers of a young and striving industry. What has been done to bring Britain into line with other countries has been achieved by purely private enterprise, unbacked by the State subventions, which have been lavishly forthcoming in the case of more than one other country, and in the face of public and official apathy. The more credit, therefore, is due to that band of pioneers who have stuck to the work and

by their efforts have placed Great Britain, if not in the lead of the nations, yet at least well up in the front rank. We should be rather less than patriotic did we not express the hope that they will demonstrate during the ensuing days of the Trials that in addition to being willing workers they are no less skilled in their conceptions of what is needed in the design and construction of the practical military aeroplane. And of the foreign participants in the Trials we need only say that if it should be that we have not learnt our lesson so well as we think and that they beat us on our own ground—well, we shall be pleased to learn from them whatever lessons are to be had for the observing.

The Million Shillings Fund.

Since we penned our comments last week upon the Million Shillings Fund of the Aerial League we have had placed at our disposal further and full information of the methods by which the scheme is being put into operation and we must record our conviction that they seem to be well conceived and as well organised. We have already outlined the broad idea of the League's executive, whereby it is proposed to make use of the voluntary aid of the civic authorities in forming local committees to carry on the propaganda and bring in the shillings to the coffers of the League—or rather, to those of the Public Trustee who has accepted the responsibility of holding and administering the moneys received. For the use of the local committees the league has issued a telling appeal to the public, parts of which are well worth quoting. The preamble of this appeal sets forth that “It is admitted that the British Empire, hitherto amply protected by its maritime supremacy, will in the future be largely dependent upon a strong aerial fleet for a continuance of this supremacy. . . . Great Britain secured her maritime ascendancy owing to her insular position, which was responsible for the development in this country of the greatest ship-building industry in the world; but these islands are not so suitably situated for the development of aerial navigation as countries where the winds are more steady and where natural landing places abound. Britain is therefore greatly handicapped in the development of a strong aeronautical manufacturing industry, and as the latter is absolutely essential, if she is to secure the same pre-eminence in the air as she has on the sea, it must be fostered in every possible way. It has, therefore, become urgently necessary to arouse public interest in aviation, and to offer prizes and awards of all kinds to manufacturers, inventors and others, with a view to fostering aerial navigation throughout Great Britain” All of which is clear, concise and to the point.

It is early yet to speak of success, but we learn that the League's initial appeal has met with a very gratifying response from all over the country. Very many replies have been received from those to whom it was addressed, promising all the help possible in achieving the main objects of the scheme, and it may now be said to be fairly launched. After all, £50,000 is not a very stupendous sum to ask for, considering the object, and we do not think so badly of our countrymen's patriotism as to doubt the success of the Fund.

THE MILITARY AEROPLANE COMPETITION.

AT last the actual event, so long awaited, is upon us, and all eyes in the world of flight are directed, metaphorically speaking, towards Salisbury Plain. That place has at any rate been the Mecca of the modern aeroplane during the last few weeks, and assembled on its green turf is the best of what the brain of man

been struck by the fact that army officers themselves were in no way unanimously decided as to the precise aspect or aspects that properly should be most encouraged in the military aeroplane. It was, after all, hardly to be expected that this should be otherwise, for it is only the ignorant who are fearless of laying down the law of opinion



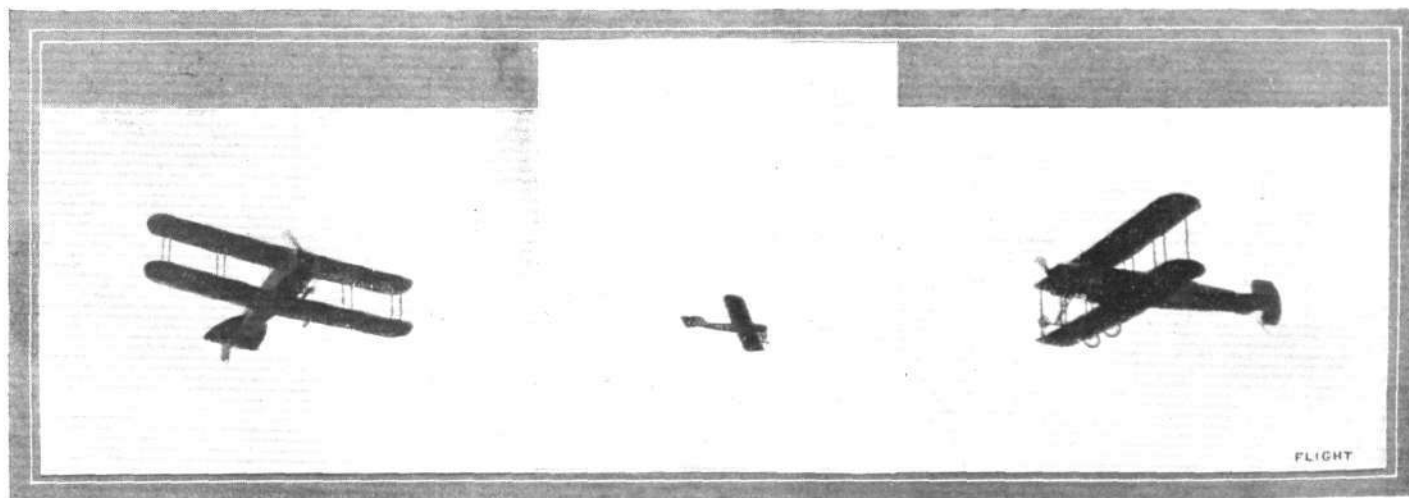
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THE MILITARY COMPETITIONS.—The pilots' quarters on Salisbury Plain.

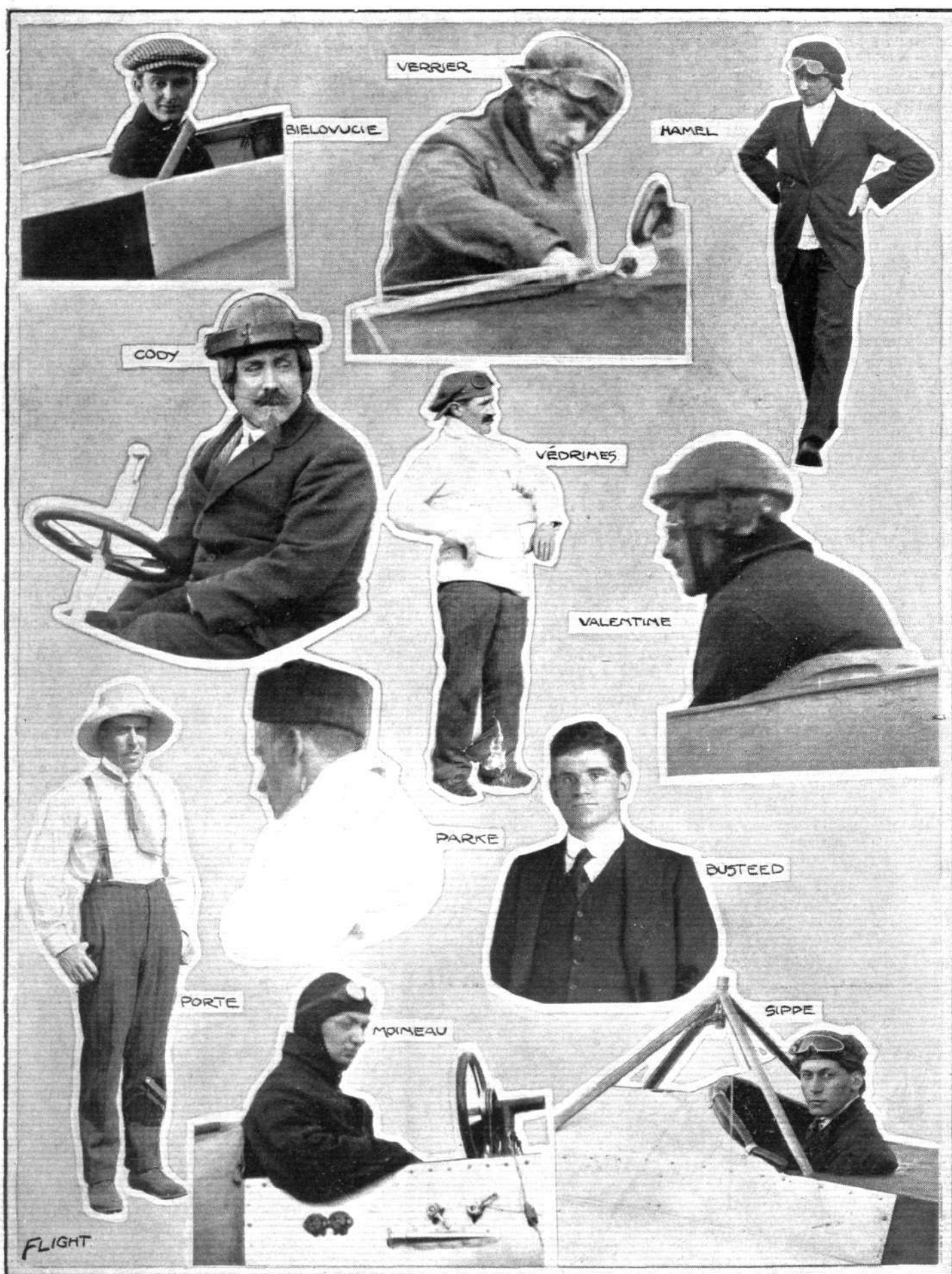
has thus far devised in the way of flying machines. It means a great deal, this contest, and its importance is hardly to be measured by present events. Those who were in the House of Commons on that memorable occasion when Col. Seely discussed the whole question of the trial with those most likely to be interested in it, will primarily see in the present occasion the fulfilment of the anticipation that was then engendered. But, those who also look into the future and hope for an evolution in aerial navigation comparable, if dissimilar, with the expansion that has occurred in the automobile, must see in the doings at Salisbury the foreshadowing of many things. As a race, we are prone to exhibit a very proper conservatism that suits well with our traditions and our temperament, though it is exasperating to the enthusiasm of the pioneer. Thankful we may be, however, that this, our national and official habit, is set off by another characteristic that tends to accelerate our development at the psychological time. It has been difficult to engender even an apparent interest in aviation on the part of the authorities for whom aviation has most meaning at the moment, but now that the Government has aroused itself to take some concern in the purpose of flight, we may hope with some assurance for future developments to be in keeping with our national dignity. And, so, it is above all things to be desired that the present trials should assist responsible persons to fix their opinions on debatable points in this matter. Those who have taken the trouble to study the question of military aeronautics must have

about matters that have not yet been tried to a practical conclusion. This study of the requirements of the military aeroplane has, without question, afforded the most intense interest during the winter months, and we should strongly advise those of our readers who have not already given it their attention to refer back to those admirable papers by General Henderson, Col. Capper and Major Radcliffe, which commenced in our issue of December 16th and 23rd last year.

The problem of satisfying requirements is, of course, only soluble within limits, and it is not unlikely that a constructor might find himself totally unable to comply even with the requirements of one officer, owing, perchance, to the conflicting character of the attributes desired. Thus, we see the reason and importance of holding trials like the present, in order that the designer's presentation of the case may be put before the military eye in its concrete form. Discussion is all very well in its way, but unless discussion results in action, it is of small consequence, no matter to what department of life it may be related. So, with the military aeroplane, discussion resulted in the formulation of certain general rules and conditions that were to govern these trials. Further discussion resulted in the elimination or modification of some of those conditions that had previously been deemed essential, and now the constructor comes forward with his machine, by which he virtually says, "this is my idea of a military aeroplane, and it has been built to fulfil the requirements you have laid down." It remains, there-



THE BRISTOL MILITARY MACHINES IN FLIGHT.—In the centre the monoplane, and on either side the tractor biplane.



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THE MILITARY AEROPLANE COMPETITIONS.—Some of the pilots designated to take part in the contest.



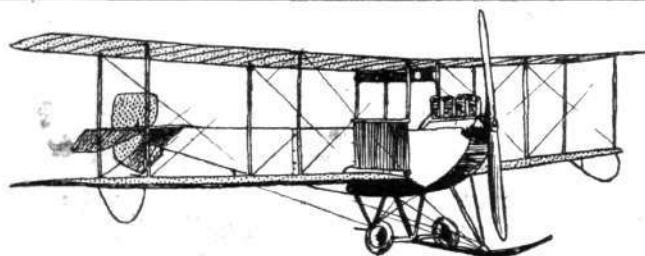
THE MILITARY AEROPLANE COMPETITIONS.—Some of the pilots designated to take part in the contest.

fore, during the next few days, for the military authorities to test and try those machines, in order to find out how nearly they satisfy the military point of view; having done which, it remains for the Government to back the British industry with some very handsome orders.

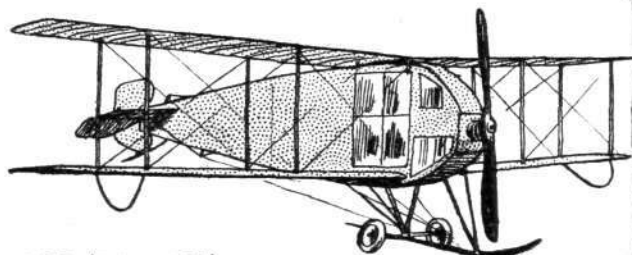
A brief summary of the conditions of the military trial is given below, and a series of silhouettes, wherefrom the machines may be readily recognised by even the uninitiated, is given in this issue. In addition there are a number of photographs of those machines not already published by us, during the past few weeks, in the series of machines entered for competition. A full table presents all the leading characteristics and information of all the competing machines, except where their arrival upon the scene of action was too late for inclusion.

Unlike events that are organised for public display, these military trials have no exact date of commencement nor of conclusion, but from August 1st it may be assumed that regular flights will take place over the Plain, and that at least a certain amount of official observation work will be carried out. Thus far the main business in the vicinity has been the preparation of the camp and the mapping out of the ground by the Judges' Committee, of which Capt. Carden, of the Royal Flying Corps, is Secretary. Stonehenge and Knighton Barrow are two well known land marks in the area of ten square miles or so that has been reserved for the trials. This

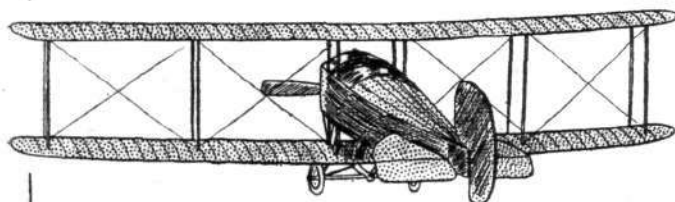
provides a straight flight of some two miles over the crest of the old Roman earthworks above Rolliston Camp, and as the whole area is within War Department territory it will be possible to conduct the event under conditions of unusual freedom for the pilots. Danger posts have been erected to warn off spectators whose presence is not only a menace to themselves but to all who fly. As most of the flying will take place at a considerable altitude there is no reason whatever for the onlookers to trespass, and we should strongly advise those who want to see the flying to go and picnic in some quiet spot and provide themselves with a good pair of field glasses. By this means they will enjoy themselves far more, and hinder others far less, than by wandering aimlessly around as much inside the danger zone as the army patrols will let them. Tents have been erected for the pilots and mechanics on the Plain, and also large marquees for catering purposes, as Amesbury is the nearest village, the accommodation therein being very limited. Special arrangements are also being made to receive Members of Parliament on August 8th, while military *attachés* who may be present during the greater part of the trial are likewise being specially accommodated. There will be no tests on August Bank Holiday nor on any Sunday, that is to say no flying under official conditions, but the machines may be expected out on any fine day. The serious business of observation and test will probably commence on the Tuesday following August Bank Holiday.



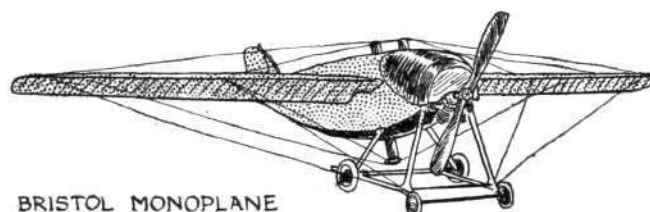
AVRO



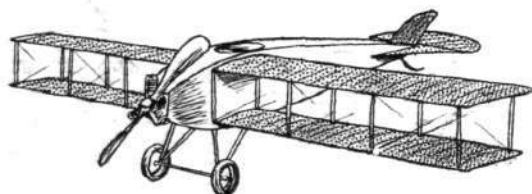
AVRO (ENCLOSED)



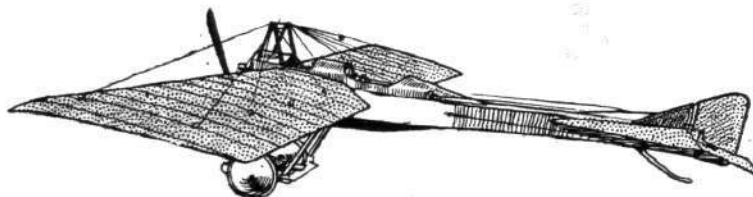
BRISTOL BIPLANE



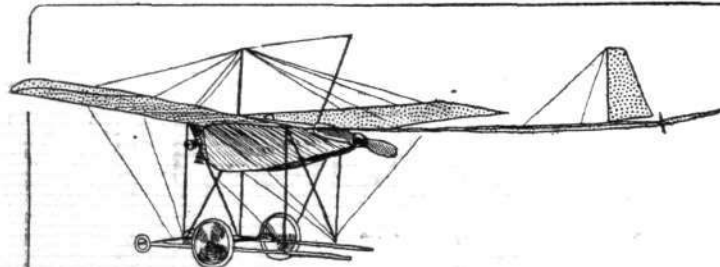
BRISTOL MONOPLANE



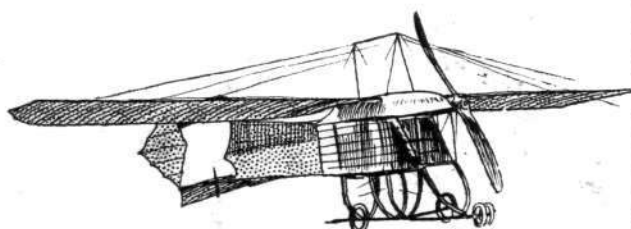
PIGGOTT



DEPERDUSSIN



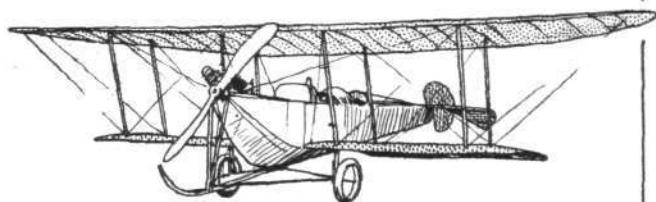
MERSEY



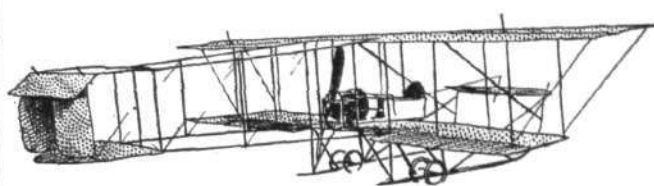
CODY (MONOPLANE)

THE MILITARY COMPETITION MACHINES.—Miniature sketches of some of the machines entered.

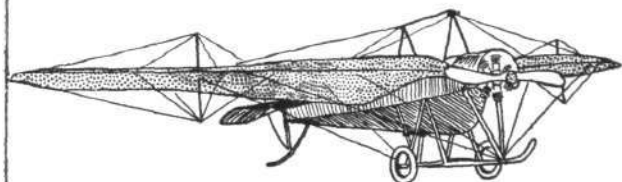
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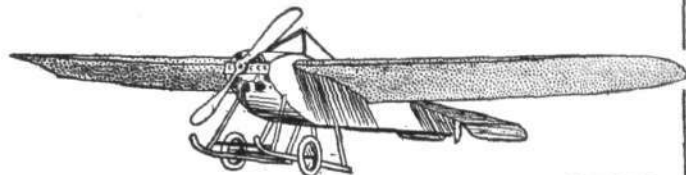
HOWARD FLANDERS



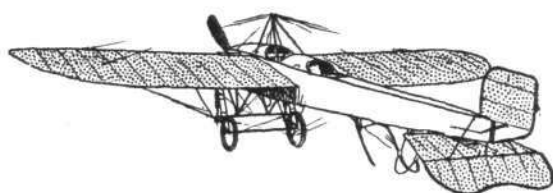
M. FARMAN



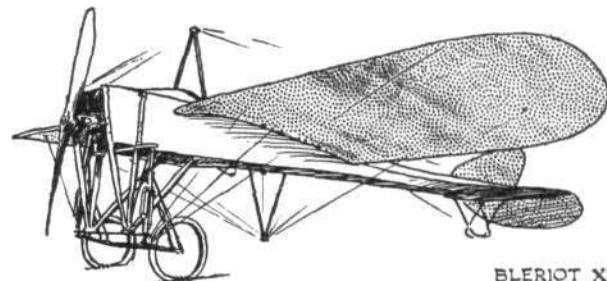
HANDLEY PAGE



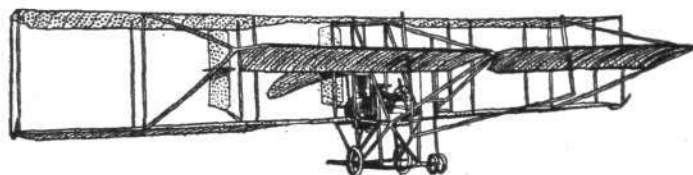
HANRIOT



BLERIOT XI. 2.



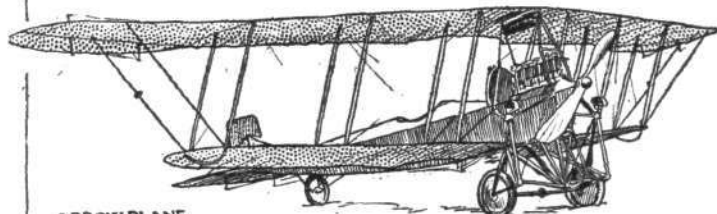
BLERIOT XX.1.



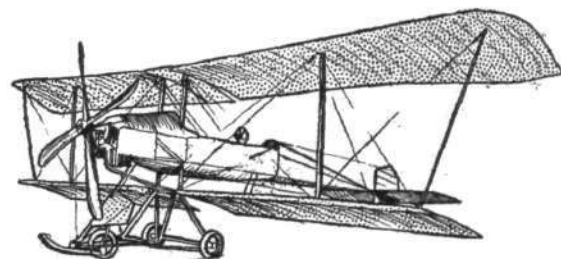
CODY BIPLANE



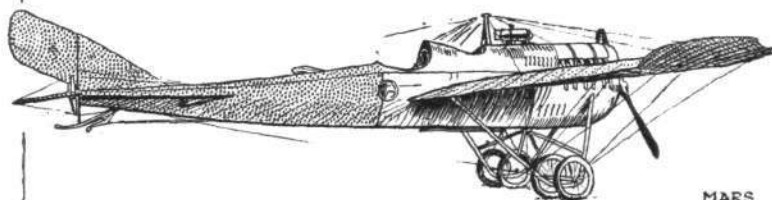
COVENTRY ORDNANCE



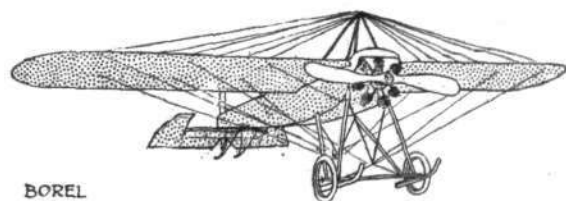
ARROW PLANE
DREADNOUGHT
JACOB LOHNER



BREGUET



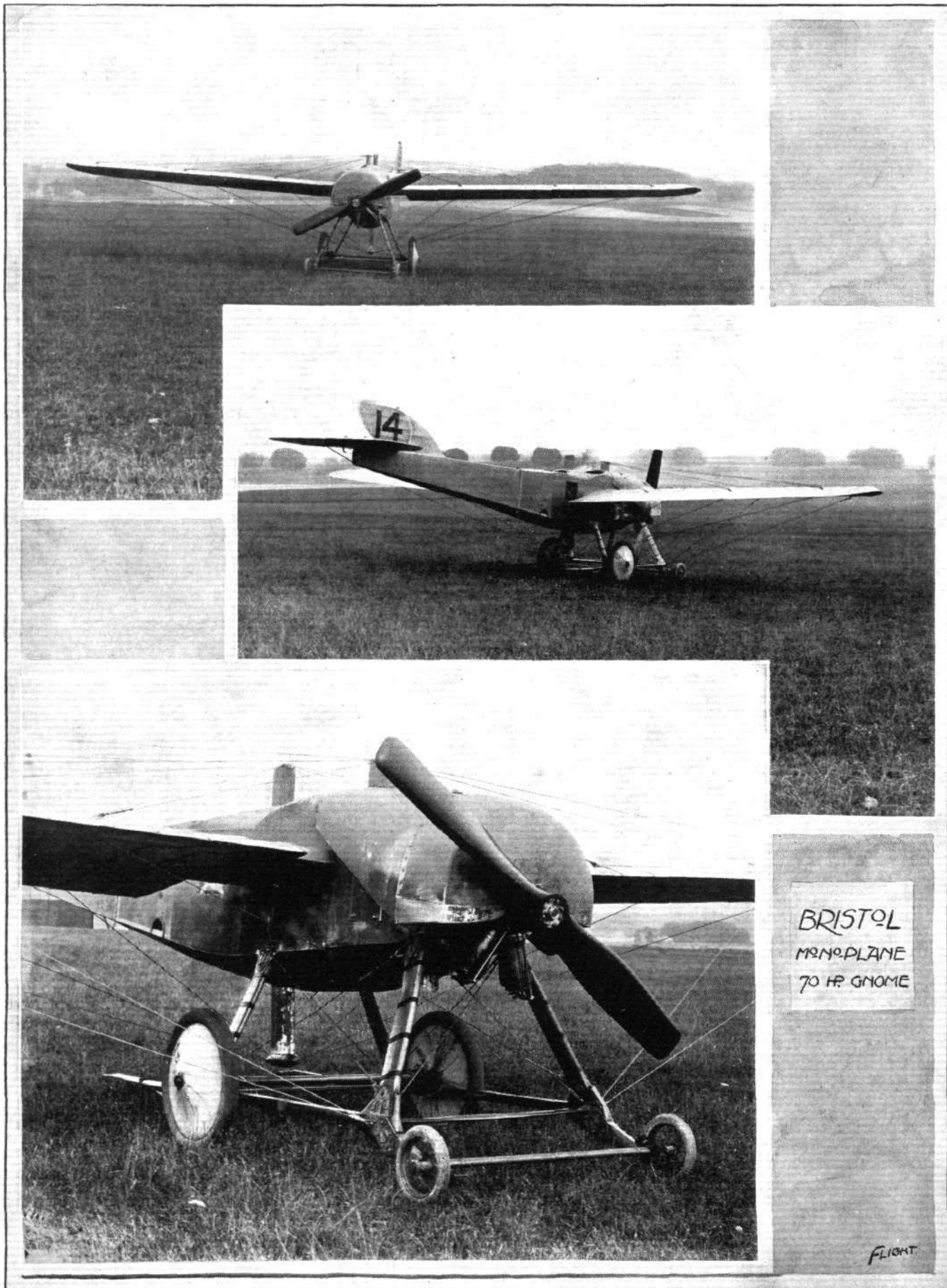
MARS



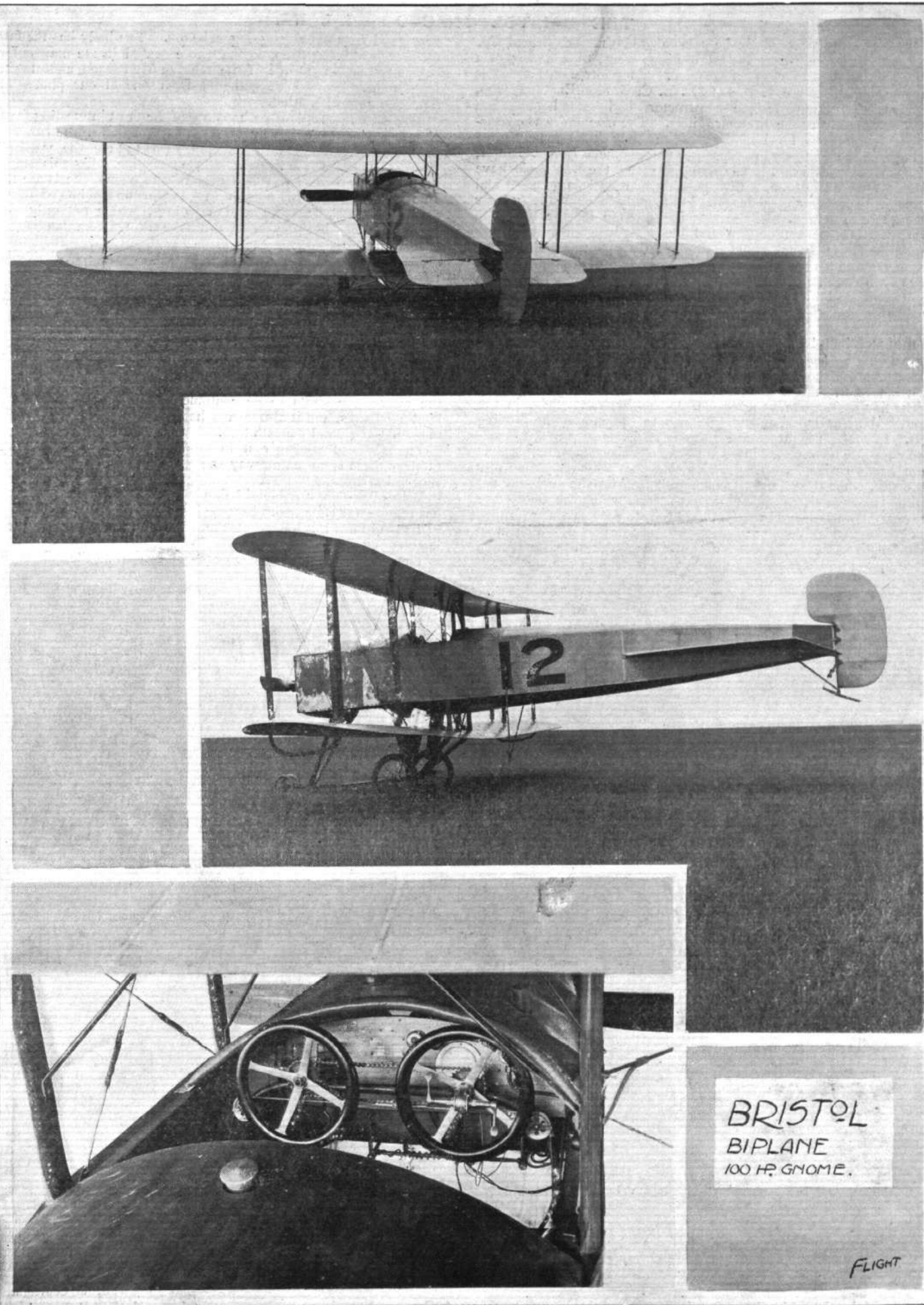
BOREL

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THE MILITARY COMPETITION MACHINES.—Miniature sketches of some of the machines entered.



THE MILITARY COMPETITION MACHINES.—The Bristol monoplane. Two machines of this type have been entered. One will be flown by Mr. James Valentine, and the other by Mr. H. Busteed.



THE MILITARY COMPETITION MACHINES.—The Bristol tractor biplane. The machine seen in the photographs has a 100-h.p. Gnome engine, and will be flown by Mr. H. Pixton. The other is equipped with a 70-h.p. Mercedes engine, and will be piloted by Mr. E. C. Gordon England, its designer. Inset are shown the details of the dual control.

THE MACHINES.

THE BRISTOL TRACTOR BIPLANE.

EARLIER in the year it will be remembered that the Bristol Co. modified their policy, as far as biplanes went, of adhering to a standard design of this type of machine. They introduced a tractor biplane, built from the designs of Mr. E. C. Gordon England, who, previous to turning designer-constructor, had served that firm most excellently as one of their pilots. The machine was characterised by its marked originality, and certainly did extremely good flying with the relatively low horse-powered engine, a 45-h.p. Clerget, with which it was fitted. The two biplanes that the Bristol Co. have entered for the trials are, really speaking, simply enlargements and refinements of the original design. In the early machine the *fuselage* was square in section. In the machines entered for the trials the *fuselage* is belled out on top and below by wooden formers over which the fabric is applied. It is sufficiently wide to seat pilot and passenger side by side, and, the body being arranged approximately midway between the two main planes, they are enabled to have a

very good view of things going on below. The body has the further advantage of being deep, so that those seated inside may suffer no discomfort from the force of the relative wind when undertaking a long flight. As will be gathered from one of our photographs, duplicate control is fitted.

The landing chassis is perhaps one of the most interesting features of the machine. A single central skid is attached to the *fuselage* by hollow struts. These are inclined forwards to take the "drift" of landing, as well as the weight of the machine. To this skid are hinged a pair of axles, to the extremities of which wheels are fitted. Interposed between the body of the machine and points on the axle near the wheels, are compression springs, which not only absorb vertical shocks, but provide for strains resulting from landing in a side wind.

The constructional details of the machine are remarkably good throughout.

THE FLANDERS BIPLANE.

A BIPLANE built by one of our manufacturers who has hitherto been known only by monoplanes of his construction must of necessity be interesting. Although in details it bears some resemblance to the monoplanes, in general ideas it is naturally dissimilar.

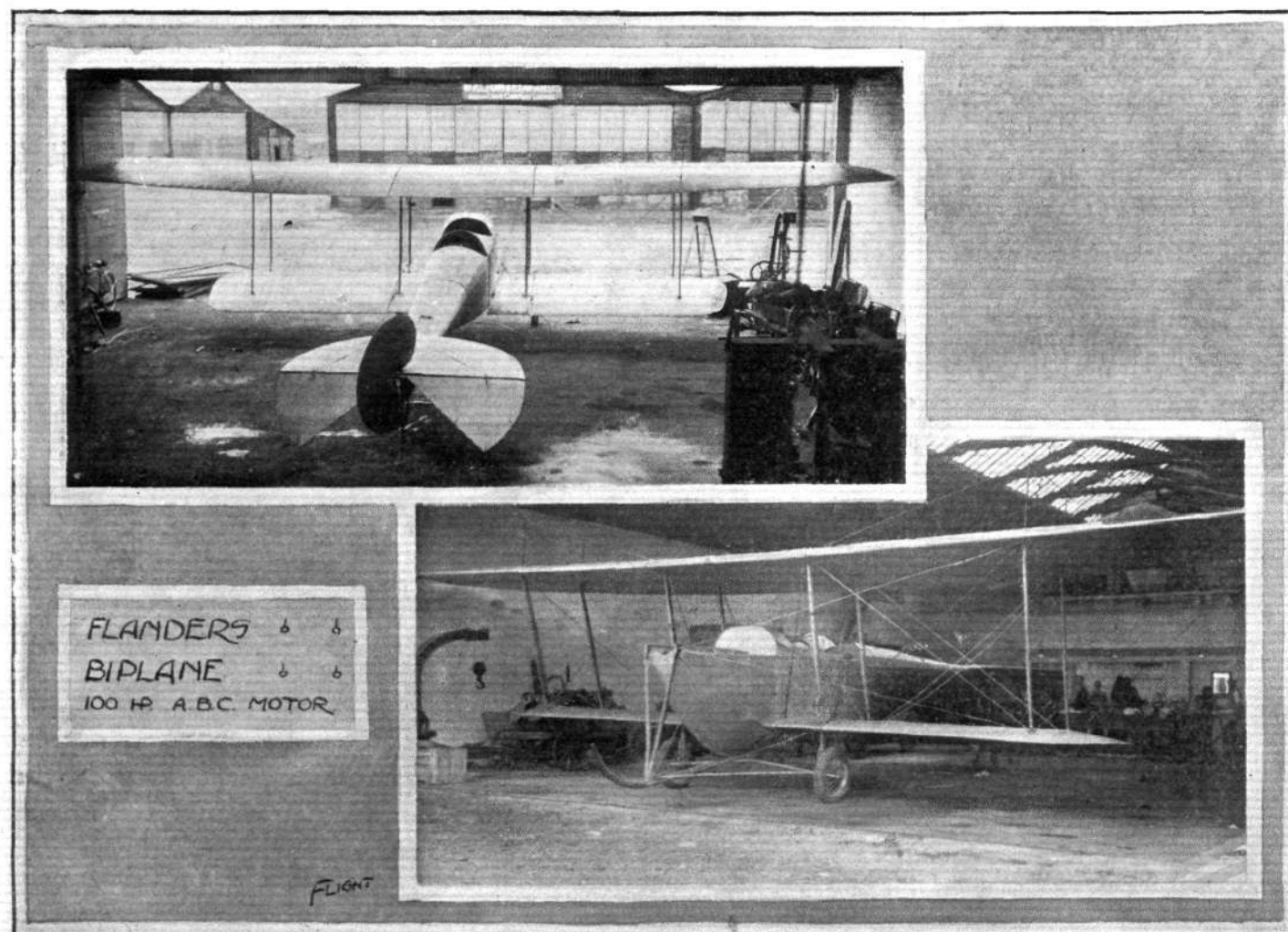
The first feature one would notice is the *fuselage*. This, in the front, is of great depth, extending down to the axle of the landing gear. In shape it is rather difficult to describe, consisting of a square whose topside is converted into a semi-circle, and on whose bottom side there stands a triangle. This section continues until about half way to the tail, when it is simply triangular. In front the semi-circular portion is, of course, cut away into gaps, from which the pilot's and passenger's heads protrude. The end of the lower triangular portion is coincident with the continuation of the front skid, which is of great length and extends half-way down the *fuselage*. The bottom of the square portion acts as a floor for the interior of the machine.

The planes, of which the top one is the larger (42 ft. as against 27 ft.), are *décaldé* or staggered, but for no aerodynamic reasons. The planes have been so arranged from purely constructional motives. Amongst other reasons is the fact that it enables one of the inter-plane struts to be continued as a vertical strut for the landing-chassis, and it also means that the passenger has an excellent view of the ground beneath him.

The pilot and passenger sit in tandem, and as regards width of *fuselage* there is no reason why there should not be two passengers if occasion arose.

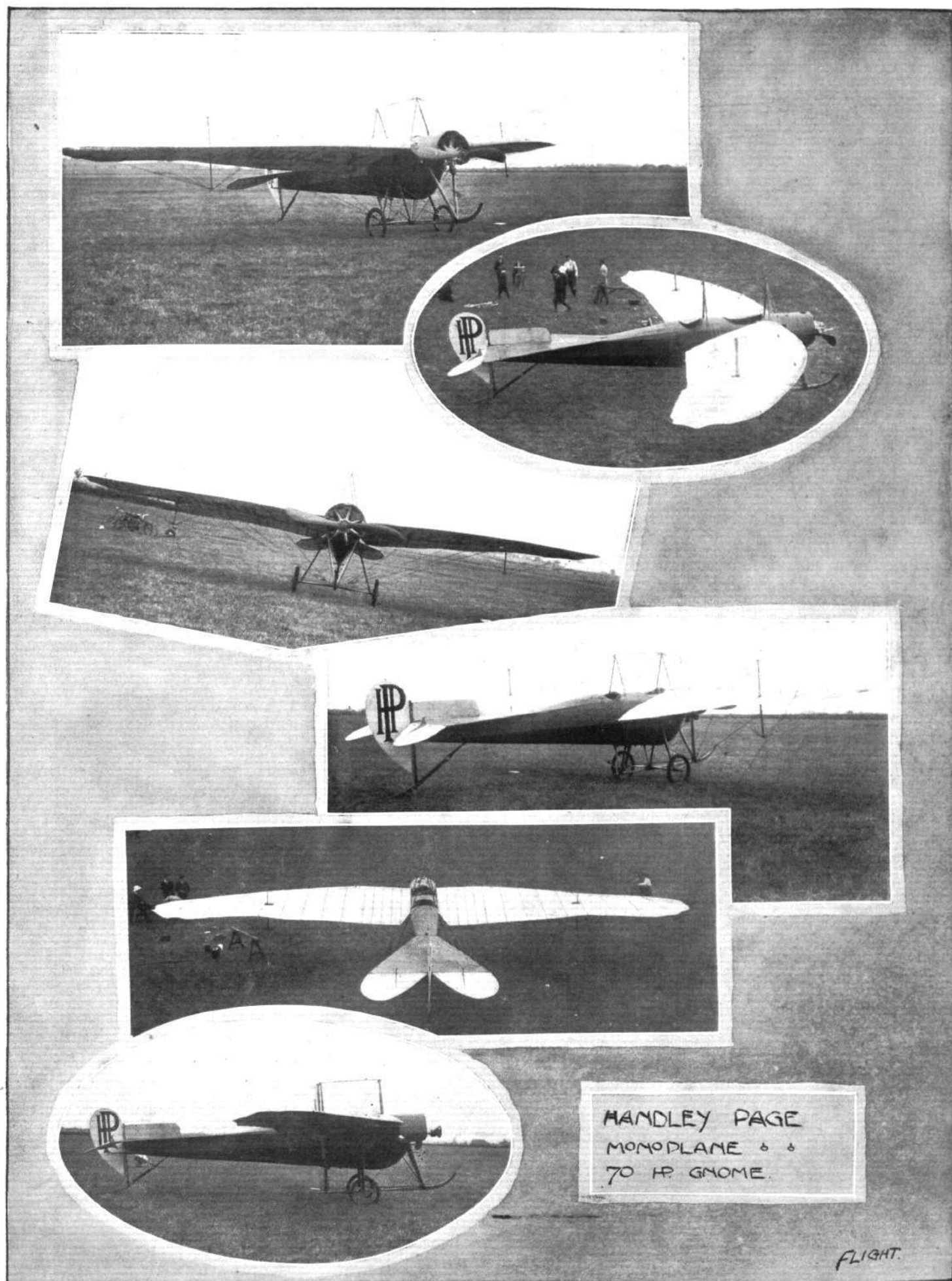
Both planes are capable of being warped, though the higher one has the greater effect, both because it is of greater span, and because in its plan form it is longer at the trailing edge than it is at the leading edge.

The tail and empennage, as can be seen from the photograph,



THE MILITARY COMPETITION MACHINES.—The 100-h.p. Flanders biplane, which will be flown by Mr. Raynham. The photographs were taken on Monday last in the A.B.C. engine shops, where the machine was having its motor installed.

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THE MILITARY COMPETITION MACHINES.—It is a similar machine to the above that Messrs. Handley Page are entering in the trials. The main differences of the Military machine from the one appearing in the above photographs are that pilot and passenger sit side by side, and the tail is somewhat changed.

are the same as those previously employed in the monoplanes, consisting of a non-lifting tail, cambered on the top surface, and a balanced rudder.

The landing chassis is of the simplest kind, consisting as it does of a long skid extending far back, a pair of internal vertical struts, and another pair of vertical struts beyond the fuselage and adjacent to the propeller. The cross axle carries a pair of wheels with tyres

of a large size, and is pivoted to the middle of the skid. Sideways and vertical movement is corrected by a pair of compression springs. When these are strained to the maximum there is still a clearance of twelve inches between the lower plane and the top of the wheel. The engine is a 100-h.p. A.B.C. If this engine does as well as its smaller prototype (the 40-h.p. on the Burgess-Wright) the whole machine should be a great success.

THE GENERAL CONDITIONS OF THE TRIALS.

FOR the benefit of those who have not followed very closely the organisation of the competition and have not studied the conditions and regulations, it may be as well to just briefly review the lines on which the competition will be run. First and foremost a word may be said about the prizes which are of two kinds, those open to the world and those open to British subjects. In the former category there are two prizes, the first of £4,000 and the second of £2,000. For the other prizes the aeroplane must be manufactured entirely in the United Kingdom with the exception of the engine, and the prizes offered are, one of £1,500, two of £1,000 and three of £500. No competitor will be allowed to take more than £5,000 in all and the War Office reserve the right to vary the proportions of the prizes if the merits of the machines warrant it, or to withhold any prize if there is no machine recommended for it by the Judges' Committee. Any machine awarded a prize may be purchased by the War Office for £1,000. The owners of ten selected machines which pass all the flying tests and are not awarded a prize will receive £100 for each machine tested.

The first duty of the Judges' Committee will be to examine the machines to see whether the parts are strictly interchangeable, *i.e.*, similar parts with one another, and with spare parts from stock. Each machine must provide accommodation for a flyer and observer, and the controls should be capable of use by either flyer or observer. Before proceeding further in the competition, the machines will have to pass satisfactorily the following preliminary tests:—

- a. Carry a live load of 350 lbs. in addition to its equipment of instruments, &c., with fuel and oil for 4½ hours.
- b. Fly for 3 hours loaded as in Clause (a) and attain an altitude of 4,500 feet. Maintain a height of at least 1,500 feet for 1 hour.
- c. The rate of climbing shall average not less than 200 feet a minute for the first 1,000 feet.
- d. Attain an air speed of not less than 55 m.p.h. loaded as in Clause (a).

During these tests, for the carrying out of which a reasonable period, based on the weather, will be allowed by the Judges' Committee, the machine must not be damaged in any important part in alighting or otherwise. A signal will be displayed whenever in the opinion of the judges the weather is suitable for flying, but competitors will be in no way bound to fly in, or confine their flying to, hours so notified as suitable.

Those taking part in the competition as flyers or passengers must be not less than eighteen years of age, and weigh not less than 132 lbs. each, but any deficiency in weight may be made up for by

means of ballast or by excess of weight in the other passenger. All pilots of machines must hold the Royal Aero Club certificate or a recognised foreign certificate, and the pilot of the machine must not be changed unless the consent of the Judges' Committee has been obtained. The competitors will have to observe special rules in regard to passing, overtaking and crossing, and the Judges' Committee has power to inflict penalties, including disqualification, for dangerous flying. The Committee also has power to postpone or abandon any items.

The preliminary conditions, already given above, which have to be fulfilled by the competitors are based upon the specification of a military aeroplane which was published at the time of the original announcement of the Competition just before Christmas last.

The other conditions which it was then stated would be required to be fulfilled by a military aeroplane are as follows:—

Plane down to ground in a calm from not more than 1,000 ft. with engine stopped, during which time a horizontal distance of not less than 6,000 ft. must be traversed before touching.

Rise without damage from long grass, clover, or harrowed land in 100 yards in a calm, loaded as in Clause (a) above.

Land without damage on any cultivated ground, including rough plough, in a calm, loaded as in Clause (a) above, and pull up within 75 yards of the point at which it first touches the ground when landing on smooth turf in a calm. It must be capable of being steered when running slowly on the ground.

Be capable of change from flying trim to road transport trim, and travel either on its own wheels or on a trolley on the road; width not to exceed 10 ft.

The pilot and observer's view of the country below them to front and flanks must be as open as possible, and they should be shielded from the wind, and able to communicate with one another.

All parts of aeroplane must be strictly interchangeable, like parts with one another and with spares from stock.

The engine must be capable of being started up by the pilot alone.

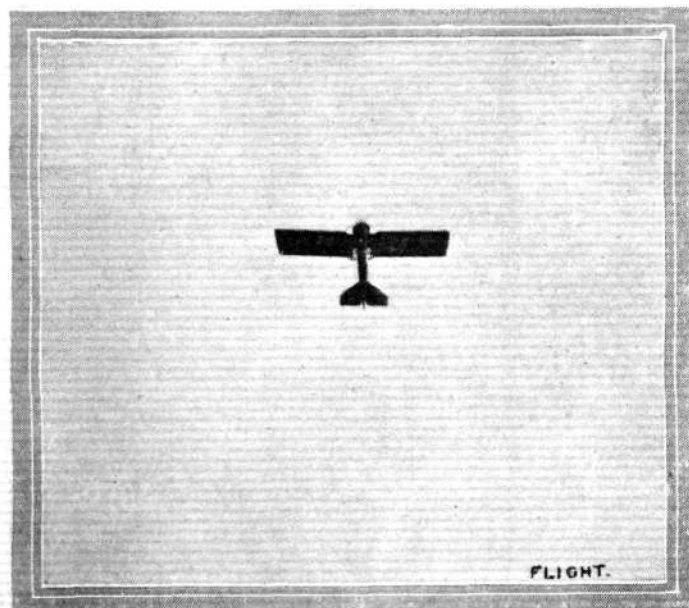
Other desirable attributes are:

- a. Stand still with engine running without being held. Engine preferably capable of being started from on board.
- b. Effective silencer fitted to engine.
- c. Strain on pilot as small as possible.
- d. Flexibility of speed; to allow of landings and observations being made at slow speeds if required, while reserving a high acceleration for work in strong winds.
- e. Good glider, with a wide range of safe angles of descent, to allow of choice of landing places in case of engine failures.
- f. It is desirable that the time and number of men required for the change from flying trim to road trim, or packed for transport by rail, and *vice versa*, should be small, and these will be considered in judging the machine. The time for changing from road trim and packed condition to flying trim to include up to the moment of leaving the ground in flight, allowance being made for difficulty in starting engine.
- g. Stability and suitability for use in bad weather, and in a wind averaging 25 miles per hour 30 ft. from the ground without undue risk to the pilot. Stability in flight is of great importance.
- h. The packing case for rail transport to be easily dismantled and assembled for use, and when dismantled should occupy a small space for storage.

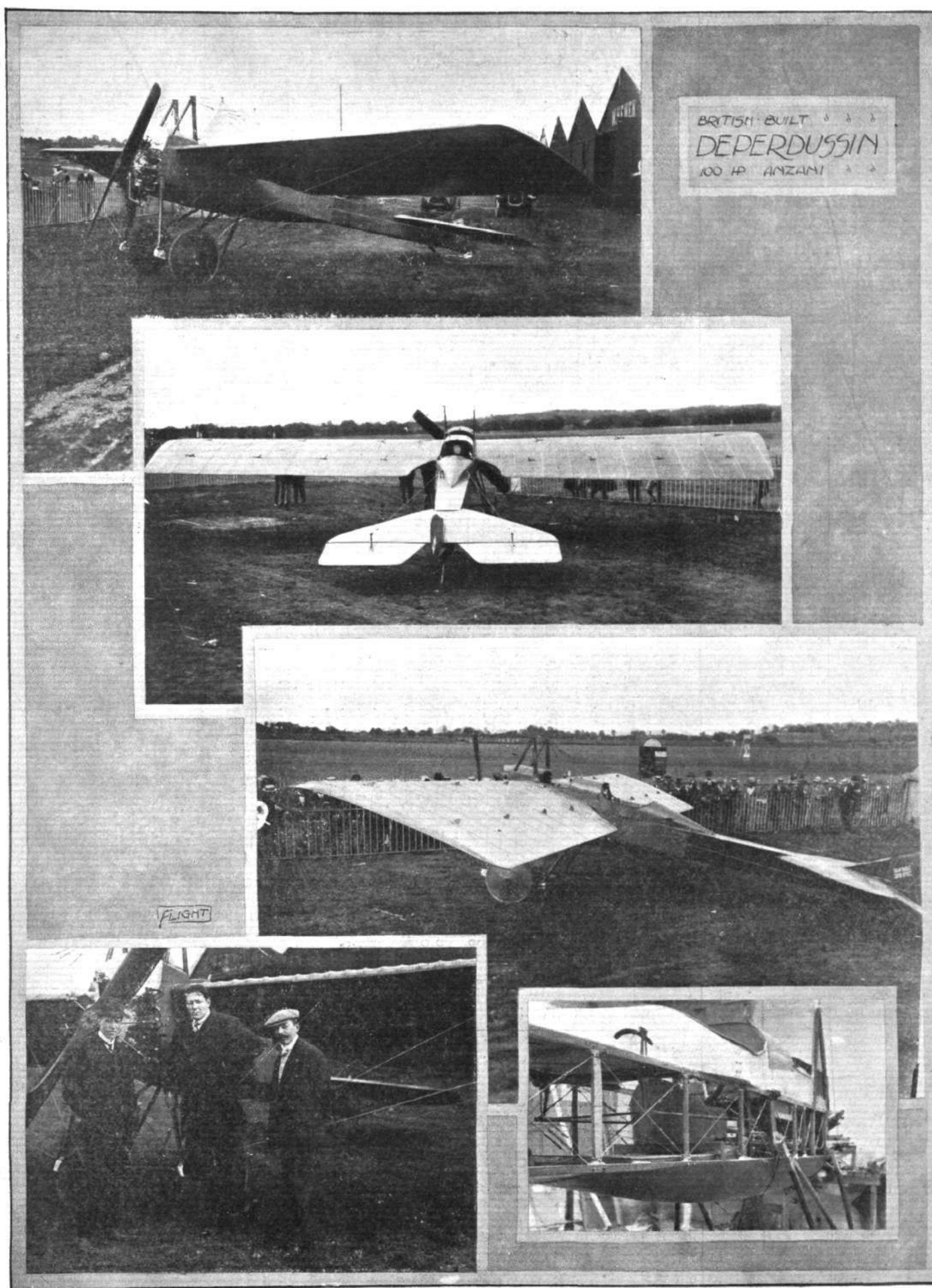
The preliminary tests and the foregoing desirable attributes will form the main basis on which the Judges' Committee will decide the relative merits of the competing machines. It is specially pointed out that an aeroplane will not necessarily be disqualified for failing to comply with the conditions.

THE JUDGES.

The Secretary of the War Office announced on Wednesday that the Judges' Committee of the forthcoming Military Aeroplane Competitions will consist of Brigadier-General D. Henderson, Director of Military Training, War Office; Captain Godfrey M. Paine, Commandant of the Central Flying School; Mr. Mervyn O'Gorman, Superintendent of the Royal Aircraft Factory; and Major F. H. Sykes, Officer Commanding Military Wing, Royal Flying Corps (Secretary).



The British-built two-seater 60-h.p. Anzani Deperdussin for the Military Trials in flight from Hendon to Farnborough last Saturday, piloted by Lieut. Porte.



THE MILITARY COMPETITION MACHINES.—The 100-h.p. Anzani-engined British-built Deperdussin monoplane, which will be piloted by Lieut. J. C. Porte, who is standing at the left of the above group of aviators. On the right of the group is Mr. D. Lawrence Santoni, Joint Managing Director with Lieut. Porte, of the British Deperdussin Co. In the centre is M. Koolhoven, Chief Engineer and Works Manager of their Highgate works.

THE MILITARY AEROPLANE COMPETITIONS.

Tabular description of aeroplanes entered.

Entrant.	Machines entered.	Type.	Chief dimensions.			Speed. m.p.h.	Weight in lbs.		Landing chassis.	Controlling surfaces.			Motor.				Propeller.			Pilot and passenger position.	Pilot.	
			Length in ft.	Span in ft.	Area in sq. ft.		Machine.	Usefulload.		Lateral.	Longi- tudinal.	h.p.	Build.	No. of cyls.	Cyl. dimen- sions.		Build.	Diam.	Drive.			
															Bore.	Stroke.						
British and Colonial Aeroplane Co., Ltd....	4	T.B. T.B. M. M.	31 31 28 28	0 40 0 40 4 40 4 40	0 0 3 3	400 400 242 242	60 57 70 70	1474 1650 792 792	700 700 600 600	W.S. W.S. W.S. W.S.	W. W. W. W.	E. (r) E. (r) E. (r) E. (r)	100 70 80 80	Gnome Daimler-Mercedes Gnome Gnome	14 4 7 7	110 120 124 124	120 140 140 140	Bristol Bristol Bristol Bristol	— — — —	D. C.R. D. D.	S. S. T. T.	C. H. Pixton E. C. Gordon England H. Busteed J. Valentine
A. V. Roe and Co.	2	T.B. T.B.	29 29	10 35 10 35	3 3	335 335	65 65	1200 1200	600 600	W.S. W.S.	W. W.	E. (r) E. (r)	60 60-80	Green A.B.C.	4 8	140 112	146 120.5	Avro Avro	10 0 10 0	D. D.	T. T.	Lieut. Parke R. L. Charteris
Coventry Ordnance Works, Ltd.	2	T.B. T.B.	33 31	3 40 3 35	0 0	350 325	60 63	1200 1300	800 800	W.S. W.S.	W. W.	E. (r) E. (r)	100 110	Gnome Chenu	14 —	110 —	120 —	Own Own	11 6 11 6	C.R. C.R.	S. S.	T. O. M. Sopwith T. O. M. Sopwith
British Deperdussin Co., Ltd.	2	M. M.	24 24	0 41 0 41	6 6	270 270	70 70	1200 1200	800 800	W.S. W.S.	W. W.	E. (r) E. (r)	100 100	Gnome Anzani	14 10	110 105	120 125	Rapid Rapid	— —	D. D.	T. T.	J. Vedrines Lieut. J. C. Porte
S. F. Cody	2	B. M.	— 37	— 0 43	— 6	— 260	70 80	— 1200	— 800	W.S. W.S.	W.A W.	E. (f) E. (r)	120 120	Austro-Daimler Austro-Daimler	6 6	— —	— —	Chauviere British Chauviere	12 0 — 11 6	C.R. — C.R.	T. — S.	S. F. Cody S. F. Cody
Breguet Aeroplanes, Ltd.	2	T.B. T.B.	34 34	0 47 0 47	0 0	400 400	72 68	1300 130	900 850	W.S. W.S.	W. W.	E. (r) E. (r)	110 110	Canton-Unné Canton-Unné	9 9	120 120	140 140	Integral Integral	11 0 9 0	G.R. D.	T. T.	Moineau W. B. R. Moorhouse
Hanriot (England), Ltd.	2	M. M.	— —	— —	— —	— —	70 70	1000 1000	500 500	W.S. W.S.	W. W.	E. (r) E. (r)	100 100	Gnome Gnome	14 14	110 110	120 120	— —	— —	D. D.	T. T.	S. V. Sippe Bielovucie
Louis Blériot	2	M. (xxi) M. (xi 2)	27 27	3 36 3 31	4 8	275 198	60 65	770 704	550 500	W. W.	W. W.	E. (r) E. (r)	70 70	Gnome Gnome	7 7	130 130	120 120	— —	— —	D. D.	S. T.	Perryon G. Hamel
Armand Deperdussin ...	2	M.	22	9 40	7	248	68	1000	400	W.S.	W.	E. (r)	100	Gnome	14	110	120	Rapid	8 9	D.	T.	Prevost
Vickers, Ltd.	1	M.	—	—	—	—	—	—	—	W.S.	W.	E. (r)	70	Via'le	—	—	—	—	—	D.	T.	McDonald
L. Howard Flanders, Ltd.	1	T.B.	31	6 43	0	400	65	1250	750	W.S.	W.	E. (r)	100	A.B.C.	8	—	—	Régy	8 6	D.	T.	F. P. Raynham
Martin and Handasyde ...	1	M.	38	0 42	0	—	65	1250	550	W.S.	W.	E. (r)	75	Chenu	6	110	190	—	—	D.	T.	Gordon Bell
*Aerial Wheel Syndi- cate, Ltd.	1	—	—	—	—	—	—	—	—	S.	—	—	—	—	—	—	—	—	—	—	—	—
Mersey Aeroplane Co. ...	1	M.	24	0 35	0	—	55	750	400	W.S.	—	E. (r)	45	Isaacson	7	—	—	—	—	G.R.	—	R. C. Fenwick
Aircraft Manufacturing Co., Ltd.	1	B.	39	10 50	6	700	55	1200	800	W.S.	A.	E. (fr)	70	Renault	8	96	120	Chauviere	—	G.R.	T.	P. Verrier
C. E. Kny	1	M.	45	0 53	0	350	80	1170	700	W.S.	W.	E. (r)	100	Mercedes	6	—	—	—	—	D.	T.	Lieut. Bier
Jacob Lohner and Co. ...	1	T.B.	31	0 53	0	—	70	1540	600	W.	A.	E. (r)	120	Austro-Daimler	6	—	—	—	—	D.	S.	Lieut. von Blaschke
A. M. Harper ...	1	M.	27	0 35	0	—	60	—	—	W.S.	W.	E. (r)	60	Green	4	140	146	—	—	D.	S.	—
Piggott Bros., Ltd. ...	1	T.B.	17	6 25	6	100	55	300	400	W.	W.	E. (r)	35	Anzani (Y)	3	105	130	Normale	7 0	D.	T.	Parr
Handley Page, Ltd. ...	1	M.	29	0 41	0	—	55	850	600	W.S.	W.	E. (r)	70	Gnome	7	130	120	Chauviere	7 9½	D.	T.	H. Petre
Société Anonyme des Aeroplanes Borel ...	1	M.	23	0 34	0	165	70	735	400	W.S.	W.	E. (r)	80	Gnome	7	124	140	Régy	8 0	D.	T.	Chambenois

* We are informed by the inventor that this machine is of copyright design, and may not yet publish particulars.

References.—Type: T=tractor; B=biplane; M=monoplane. Chassis: W=wheels; S=skids. Control: W=warp; A=ailers; E=elevator; r=at rear; f=in front.
Propeller drive: D=direct; C.R.=chain reduction; G.R.=gear reduction. Pilot and passenger position: S=side by side; T=tandem.

FLIGHT

AUGUST 3, 1912.

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

Committee Meeting.

A MEETING of the Committee was held on Tuesday, July 30th, 1912, when there were present:—Mr. R. W. Wallace, K.C., in the Chair, Mr. Griffith Brewer, Mr. G. B. Cockburn, Capt. J. D. B. Fulton, R.F.A., Prof. A. K. Huntington, Mr. F. K. McClean, Mr. C. F. Pollock, and Com. C. R. Samson, R.N.

New Member.—The following new member was elected:—Eng. Lieut. Edward F. Briggs, R.N.

Aviators' Certificates.—The following aviators' certificates were granted:—

- 262. Private John Edmonds, R.M.L.I. (Short Biplane, Naval School, Eastchurch).
- 263. Sydney Pickles (Bristol Biplane, Bristol School, Brooklands).
- 264. Major John Frederick Andrews Higgins, R.F.A. (Bristol Biplane, Bristol School, Brooklands).
- 265. Eng. Lieut. Edward Featherstone Briggs, R.N. (Short Biplane, Naval School, Eastchurch).
- 266. Capt. Charles Percy Nicholas, I.A. (Bristol Biplane, Bristol School, Brooklands).
- 267. Lieut. Kenlis Percival Atkinson, R.F.A. (Bristol Biplane, Bristol School, Brooklands).

F.A.I. Aeronaut's Certificate.—The following F.A.I. aeronaut's certificate was granted:—

- 26. Sergeant McGrane.

Airship Pilot's Certificate.—The following airship pilot's certificate was granted:—

- 12. Sergeant McGrane.

Army Manœuvres.

At the request of the War Office, the following letter has been sent to all aviators:—

"DEAR SIR,—The Army Council has called the attention of this Club to the forthcoming manœuvres which are to take place in the Eastern Counties in September next. They are strongly of the opinion that the presence of aircraft, other than such as are employed by the Military authorities, over the manœuvre area during the operations would involve not only serious inconvenience and possible danger to military aircraft and to the troops engaged, but also danger to the large number of spectators present.

"The Committee of the Royal Aero Club has, therefore, been asked to communicate with you and will be glad if you will fall in with the views of the Army Council and carefully avoid making flights over, or landing within, the Manœuvre Area, as shown on the attached skeleton map, between September 7th and 20th next inclusive.

"The committee is confident that, in the best interests of aviation as well as on patriotic grounds, you will assist the military authorities by adhering to their request, and signify your assent on the enclosed form which will be forwarded to the Army Council.

"It need hardly be pointed out to you how undesirable it would be if recourse were made to the powers conferred by the Aerial Navigation Act, 1911.

"Yours faithfully,

"29th July, 1912.

"C. D. ROSE, Chairman."

The Rolls-Grace Memorial.

The memorial window placed in All Saints' Church, Eastchurch, in memory of the late Hon. C. S. Rolls and Mr. Cecil S. Grace was unveiled by His Grace the Archbishop of Canterbury, on the 26th ult. Particulars are given below.

166, Piccadilly.

HAROLD E. PERRIN, Secretary.

THE ROLLS-GRACE MEMORIAL.

ON Friday of last week a large number of friends of aviation, including Lady Llangattock, Lady Shelley, Lady Dunne, Miss Dunne, Mr. Roger W. Wallace, Professor A. K. Huntington, Mr. Alec Ogilvie, Mr. Griffith Brewer, Mr. Frank K. McClean, Mr. J. W. Dunne, Mr. and Mrs. Percy Grace, Mr. J. Grace, Mr. Grunhold, Mr. Horace Short, Mr. T. O'B. Hubbard (Secretary of the Aeronautical Society of G.B.), and Mr. Harold E. Perrin (Secretary of the Royal Aero Club), were present at All Saints' Church, Eastchurch, on the occasion of the unveiling of a stained-glass window in memory of the late Hon. C. S. Rolls and Mr. C. S. Grace. Having dedicated the

window "To the Glory of God and in memory of His servants, Charles Stewart Rolls and Cecil Stanley Grace," the Primate gave a short address, taking as his text the words from the 8th Psalm, "Thou makest him to have Dominion." He pointed out the value of the work of these two pioneers, who from boyhood up had revealed perseverance, resource and courage, and went on to say we had no right to doubt the greatness of the work which they had helped to initiate, and which could only succeed by experiment, which meant risk and self-sacrifice. The window has been designed by Mr. Karl Parsons and it is in two sections. In one panel is a figure representing Patient Endurance, while the other represents Hope.

THE "DAILY MAIL" DEMONSTRATIONS.

DURING the past week the great attraction at Brighton and other points on the south coast has been the hydro-aeroplanes, and, as we predicted awhile ago, the waterplane has come, boomed, and conquered. Mr. Grahame-White has been besieged by applicants for rides over the sea, and many passengers after their initial experience have booked for further trips. On Wednesday of last week he was kept busy all day, one of his passengers being the Mayor of Brighton, Mr. C. Thomas Stanford, and during the evening he made a trip with his machine outlined with electric lights. During the day he won a handicap race against Mr. Harry Preston's motor boat, "My Lady Molly." Practically the same programme was repeated on the following day, and during a night flight Mr. Grahame-White several times switched the electric lights off and on. A little variation was given on Friday morning, when, a wire having arrived from M. Paulhan for one of his mechanics to cross by the Newhaven boat, a difficulty arose as to how to get to Newhaven in time. The problem was solved by Mr. Grahame-White flying with him and alighting alongside the boat in Newhaven harbour five minutes before she started for France. Among the passengers during the day was Mr. Wilkie Bard, who promptly booked for a second trip. Mr. Travers also took up some passengers on the Farman hydro-aeroplane. On Saturday M. Paulhan arrived, and at once set to work on the Paulhan-Curtiss Triad. He worked to such purpose that a trial flight was made with it during the evening. Mr. Grahame-White and Mr. Travers made a number of flights with passengers, and the

former flew over the Sussex County Cricket Ground, at Hove, where the Australians were playing. The stormy conditions made flying out of the question on Monday and Tuesday.

With regard to the other *Daily Mail* pilots, on Wednesday of last week, M. Salmet flew from Worcester to Stratford-on-Avon, making a stop at Evesham on the way, and also later in the day went on to Gloucester. M. Fischer was flying the Farman hydro-aeroplane over Weymouth Bay, and Mr. B. C. Hucks went from Birmingham to Loughborough whence, after giving five exhibition flights he went on to Long Eaton, Derbyshire. On the following day, Mr. Hamel was flying at Durham, M. Fischer at Weymouth, and M. Salmet continued his tour from Gloucester to Cheltenham. On Friday, at Weymouth, M. Fischer and Hubert flew from Weymouth to Exmouth, covering a distance of about fifty miles in an hour. M. Salmet having travelled over night on to Cirencester, gave a demonstration there for the benefit of the local hospital. Saturday saw Mr. Hucks flying from Loughborough to Leicester and then on to Coventry, a bag of mail matter being taken on the latter trip. Mr. Hamel, while flying from Thornaby to Sunderland, was forced down near Hart on the Durham coast. In the West, M. Salmet went on to Swindon, from which point he visited Blunsdon and Cricklade. The bad weather of Monday prevented any flying, but on Tuesday Mr. Hamel made two very fine flights over the East Bolden Racecourse near Sunderland. M. Salmet flew from Swindon to Northampton, Mr. Hucks from Coventry to Rugby and back.

FROM THE BRITISH FLYING GROUNDS.

Royal Aero Club Eastchurch Flying Ground.

THE last week has been a far more favourable week for flying than most, and consequently good use has been made of it. Capt. Gordon started the ball rolling by putting in an early morning flight on Tuesday, on the Henry Farman with a passenger, and following the river up to Chatham, where he had intended landing, but was prevented by fog, so had to return to Eastchurch straight away. He was again out in the evening on the same machine, and had to make a forced landing at Brambledown on account of engine trouble (inlet springs). Later on in the evening the new 100-h.p. triple twin tractor biplane built by Short Bros., for the Admiralty, made its appearance and is a very fine bit of workmanship, the landing chassis being particularly noticeable. The machine is a tractor biplane, with two 50-h.p. Gnoms, one behind the other, the front one driving a direct coupled tractor screw and the rear one driving two chain-driven tractors, one on either side. The ailerons are of the double acting type, working both upwards and downwards. The passenger and pilot sit side by side. Lieut. Malone is the pilot in charge of the machine, and he has been putting in some flights on her during the past week.

Commander Samson was out on Tuesday evening on the Short monoplane, also Lieut. Briggs practising on the school machine preparatory to going for his *brevet* which he successfully obtained early on Saturday morning.

On Wednesday, Commander Samson was out again on the Short monoplane, also Lieut. Briggs and Private Edmunds on school machine. Mr. McClean flew the 100-h.p. triple tractor for the one-hour test flight, which it successfully accomplished, the latter quarter being finished in most unpleasant surroundings, in the nature of a thunderstorm. Capt. Gordon went to Burntwick Island to do some water-planing on the Henry Farman, and during the day put in two hours' practice on the river between Sheerness and Chatham. Lieut. Grey took out the 70-h.p. tractor machine, and did a short flight in the evening.

Thursday early morning started with fine weather, when Lieut. Grey on the 70-h.p. tractor machine, accompanied by Lieut. Parke on the Henry Farman, flew to Dover; Commander Samson started later on the Short monoplane, but was obliged to return on account of rain. In the evening he took up one of the school biplanes to well on 2,000 ft., and later on went for a circuit of the Island on the Short monoplane. Lieut. Malone followed on the 100-h.p.

triple twin, putting in several circuits of the aerodrome. Lieut. Briggs was out on school machine; also Mr. Ogilvie on N.E.C.-engined Wright, with Mr. Fowler as passenger.

Friday morning was devoted to the unveiling of the memorial window in All Saints' Church, Eastchurch, to the memory of the Hon. C. S. Rolls and Mr. Cecil Grace, by the Archbishop of Canterbury. Among those present were: Lady Llangattock, Mrs. P. Grace, Lady Shelley, Lady Dunne, Mr. Roger Wallace, Professor Huntington, Mr. Alec Ogilvie, Mr. Griffith Brewer, Mr. Frank McClean, Mr. J. W. Dunne, Mr. Percy Grace, Mr. J. Grace, Mr. Grunhold, Mr. Massac Buist, Mr. Perrin, Mr. T. O'B. Hubbard, and Mr. Horace Short. Lunch was served in one of the sheds on the Aero Club ground, and afterwards the visitors were shown round the various sheds and machines. The Archbishop of Canterbury took a great interest in the different types of machines, and would no doubt, if the weather had permitted, taken a short trip in Mr. Alec Ogilvie's Wright machine.

About 7 o'clock the wind dropped, and the following aviators and machines made their appearance: Mr. Alec Ogilvie, N.E.C.-Wright; Mr. McClean, 70-h.p. tractor; Lieut. Malone, 100-h.p. tractor; Commander Samson, Short monoplane; Lieut. Briggs and Pte. Edmunds, school biplane. On Saturday a large number of machines were out in the evening, including Commander Samson, Short monoplane; Lieut. Grey, 70-h.p. tractor; Lieut. Malone, 100-h.p. tractor; Lieut. Briggs, school biplane; Mr. McClean, 70-h.p. tractor, with Dr. Lockyer, and afterwards Mr. H. Perrin, as passengers. Mr. Jezzi was also giving passenger straights.

Sunday was to have seen some hydro work with Mr. McClean's waterplane, but the wind continued all day at 30 m.p.h., and increased to nearly, if not quite at times, 40 m.p.h. on Monday, when again no flying was possible.

Brooklands Aerodrome.

THE Bristol school have been exceptionally busy all the week. Starting Monday morning Mr. Hotchkiss and Mr. Merriam have created a record that eclipses everything done previously in school work in England. They have put up with the aid of pupils solus flying well over 300 flights in the week, making a flying mileage of over 1,600 miles, taking a *brevet* each day. The seven pupils successful were Lieuts. Waldron, Atkinson, Major Higgins, Cpts. Macdonell, Nicholas, Messrs. Pickles and Holyoake. All this work was accomplished with only one small smash, which only laid up one machine for about a couple of days. This record taken by the Bristol school, under the charge of Mr. Hotchkiss, possibly beats any other two schools' work in England coupled together since aviation started. All the other pupils at the school making excellent progress, getting as much flying as they could do with. On Saturday neither Mr. Hotchkiss nor Mr. Merriam could be found all day, both being in bed trying to regain many hours of lost sleep.

At the Vickers Schools work has been somewhat slack. Capt. Beatty was seen out occasionally at the beginning of the week on No. 5, and the Farman biplane was out only occasionally. Mr. Sims with the Avro was out nearly every day, and on Saturday morning early he put up about half hour's flight in good style in a nasty wind. Sopwith's School is busy as usual all the week, Major Treacher making excellent progress, and is now quite ready to get his ticket. Mr. Hedley out many times on the Farman solus flying. Mr. Perry out every day on both Burgess-Wright and Farman, giving a lot of tuition to all the other pupils. The two Martin Handasyde machines have been working hard every day, Mr. Bell putting up an excellent flight on Wednesday on the 100-h.p. Chenu.

Mr. Pixton flew over from Salisbury on Wednesday evening with a passenger on a Bristol monoplane, doing the journey in five minutes over the hour. Mr. Arthur and Mr. Hotchkiss flying the same two-seater with passenger every day since. Mr. Hotchkiss first trip in good-powered monoplane on Thursday morning saw him up at a height of 1,600 ft. Friday, Mr. Arthur took up Prince Cantacuzene for 20 mins. on this monoplane, the latter joining the Bristol school to learn to pilot the machine.

The latest arrival to Brooklands is the Flanders biplane; though delighting everyone who sees it in the hangars, it has not shown its paces yet in the air, but it is sure to be out this next week.

Saturday evening produced a goodly number of spectators, who witnessed, in spite of rather bad weather, a good show of flying. The first machine out was the Bristol with Mr. Merriam, who made two circuits like riding on a scenic railway, and had not the machine been in the hands of a really good pilot there might have been trouble. Later came Mr. Perry on the Burgess-Wright. At 6 p.m. the start was to have taken place for the bomb-dropping competition, but weather reduced the starters. Mr. Perry started first and threw his bombs rather wide. Merriam next,



"Flight" Copyright.

Mr. H. J. D. Astley, one of our finest English aviators, who has recently been again flying so splendidly.

who threw one very good bomb at about 10 feet from mark, but the second was very wide. Mr. Hotchkiss was seen sprinting across the ground to get in his Bristol to start before time disqualified, which he only just managed, and making two circuits won competition with an average of 17 feet from mark. Mr. Merriam was second. At 7 p.m. weather was still bad and only two machines turned out for the cross-country race, Mr. Hotchkiss on the Bristol two-seater monoplane and Mr. Perry on the Burgess-Wright, the latter receiving about 1½ mins. start. Mr. Hotchkiss should have won this race, but he took no chances flying at a safe height and made too wide a turn. Mr. Perry flew as he always does, not wasting a second on his turn and keeping a beautiful course. From the enclosure when the two machines were returning it could not be told which machine was going to win, as the Bristol monoplane was quickly overhauling the Burgess-Wright, and the latter passed over the line a few feet from the ground about three seconds ahead of Mr. Hotchkiss who was some 600 ft. up. After this weather seemed to improve, which brought out Vickers, Spencer, and the Roe School machine, all putting up very good flying. Mr. Hotchkiss went away again on the monoplane with Prince Cantacuzene as passenger, quickly rising to 1,500 ft. and flying round for about half an hour. Prince Cantacuzene, of Roumanian Royal Blood, who is an excellent biplane pilot, is over in this country intending to learn to fly a monoplane and then fly a Bristol back to his own country. Mr. Arthur gave two or three passenger flights on the monoplane rising to heights up to 2,000 ft. and giving beautiful exhibitions of spiral *vol planés*. Earlier on in the evening a monoplane was seen approaching at an altitude of some 2,000 ft., which turned out to be Mr. Petre on the new Handley Page. He glided down into Brooklands, showing an excellent gliding angle, and then switching on made several excellent turns and landed in front of the enclosure. He had come from the other side of London, and to cross London, without breaking the Aero Club rules, had strictly followed the course of the Thames, which reminds one of the late poor old D.G.'s stunt. Flying was continued till dark, there having been many passengers who experienced their first pleasures of the air. The Martin Handasyde, the favourite of Brooklands, showed itself to the public by being taken round the track in its cage at about 3 m.p.h. behind a steam engine, on its way to Salisbury for the military trials.

Sunday and Monday proved wash-outs as regards flying, owing to a continuous high wind.

Eastbourne Aerodrome.

ON Wednesday last week Lieut. Murray was out first, and made a number of excellent straight rolls, but could not quite manage to get the Anzani to lift. Mr. Fowler then had the 28-h.p. Blériot out; after doing a circuit, however, the engine suddenly stopped, and he was obliged to come down some distance from the sheds. On examination it was found that a taper pin in one of the timing-wheels had sheared off. On Thursday Lieut. Murray and Messrs. Lerwell and Gassler all worked hard, but did not achieve any great results.

On Friday evening, the Anzani having been tuned up, both Lieut. Murray and Mr. Lerwell succeeded in doing one or two short hops. On Saturday, Fowler took up Mr. Chapman for trip in the two-seater Blériot; he, however, did not succeed in breaking the height record, in fact at times considerable anxiety was felt for the safety of some cows which happened to be grazing at the far end of the ground. Sunday, Monday and Tuesday were all too rough for outdoor work.

Farnborough (R.F.C.)

TUESDAY evening Capt. Reynolds made 30 mins. flight on Henry Farman with passenger at height of 2,000 ft. Mr. de Havilland on BE 4 doing circuits. M. Moineau one hour's flight on 100-h.p. Breguet. Cody out on circuit bus, first time since smashed by pupil a few weeks ago. He has got his 100-h.p. engine in again; also rudder planes off his monoplane.

Cody on Wednesday evening out on bus carrying passengers, one flight taking three passengers. Mr. de Havilland on factory bus experimenting with maxim gun. Capt. Reynolds on Henry Farman several flights carrying passengers. Major Moss 30 mins. flight on Henry Farman, reaching height of 1,500 ft. Capt. Fulton flew new Avro to Salisbury. Major Brooke-Popham flew over from Salisbury with passenger on Avro monoplane, passing over at height of 3,000 ft. Airship Gamma out scouting practice.

Early Thursday, Major Moss on Henry Farman, six good flights, three with passengers, one at 2,000 ft. Airship Gamma out for four hours' cruise. In the evening Cody doing circuits and tuning up for army trials. Capt. Reynolds on Henry Farman flying well in spite of choppy wind, later Major Moss out on same machine, Mr. de Havilland flying both BE 1 and BE 4. Major Brooke-Popham returned to Salisbury on the Avro, taking passenger.

Major Moss, Friday, 30 mins. flight on Henry Farman, Mr. de Havilland taking passenger on BE 4. Verrier flew new Maurice

Farman over from Brooklands. In evening, Cody doing circuits on bus with fine glides from 2,000 ft. Verrier on Maurice Farman doing War Office tests, at the same time showing us some very fine flying. Mr. de Havilland several flights on BE 4, Capt. Mackworth on BE 1 flying very high, Major Moss on Henry Farman several flights. While this pilot was away on one flight, the factory people put up a stand in the flying track for speed test, and Major Moss, not knowing, landed rather close, and on trying to avoid it landed sideways, and broke undercarriage. Cody flying long after dark.

Saturday evening Lieut. Longmore, R.N., flew new Maurice Farman to Salisbury. Later, Cody left for Salisbury on his bus to take part in Army trials. Monday weather too rough for flying. Tuesday morning Mr. de Havilland on BE 4 in 30 m.p.h. wind, flying well and doing some fine banks.

London Aerodrome, Collindale Avenue, Hendon.

Grahame-White School.—A capital day's work was put in Monday last week, the morning being calm and clear after 5.15. At the half hour, Mr. Cholmondeley got in straights on No. 7, followed by Capt. Salmond, Lieut. Rathbone, and Mr. Hoelscher. Then Lieut. Allen up with Mr. Blackburn behind him, while Mr. Lan-Davis experimented on the 25 Anzani-Blériot. Then Lieut. Stopford doing straights with Mr. Blackburn, who also took Lieut. Small for a passenger flight. Then Capt. Halahan out rolling, and after the whole performance repeated. Mr. Cholmondeley, Capt. Salmond, Lieuts. Rathbone and Allen, and Mr. Hoelscher and Lieut. Stopford each followed for a third lesson. In evening, work started at 6.16, when Capt. Halahan out rolling on No. 7, followed by Lieut. Rathbone, doing straights solo, and Lieuts. Stopford and Allen straights with Mr. Blackburn. Then Mr. Cholmondeley up for straights, and Capt. Salmond for circuits, while Mr. Lan-Davis out rolling on Blériot. Mr. Hoelscher making his first solo efforts on No. 7. After this, Lieuts. Rathbone and Stopford and Mr. Cholmondeley, and Lieut. Allen having a second lesson, while M. Desoutter took out the Gordon-Bennett Blériot for an hour's practice, making some very pretty flights.

Wednesday morning hopeless—wind and fog. Mr. Blackburn out at 6.26 p.m. testing air, and found it rather puffy. However, Mr. Cholmondeley out for straights on No. 7, followed by Mr. Allen doing straights with Mr. Blackburn. Then Mr. Roupell out rolling on Blériot, while Lieut. Rathbone and Mr. Hoelscher up with Mr. Blackburn, the latter breaking some of the tail-skid wires. The Baroness Schenk out, but engine broke a tappet rod, and so ended school work for evening.



"Flight" Copyright.

M. Marcel Desoutter, one of the crack flyers at the London Aerodrome, Hendon.

Thursday morning Capt. Salmond doing circuits at 4.21 a.m., followed by Mr. Cholmondeley with straights, and Lieuts. Rathbone and Stopford doing straights with Mr. Blackburn. Capt. Salmond up again doing right-hand circuits and eights, and Mr. Cholmondeley trying his first circuits. Lieuts. Rathbone and Stopford out again, and then a third lesson all round, finishing with a flight by Mr. Manton, who recently took his *brevet*, and is now in the Grahame-White works. No school in evening, but Messrs. Astley and Desoutter out on the Gordon-Bennett Blériot, the latter flying for an hour and a quarter, and making some very fine exhibitions.

A few flights Friday morning, during intervals of fog, wind and rain; Baroness Schenk, Capt. Salmond and Mr. Cholmondeley put in circuits, and Lieut. Rathbone straights with Mr. Blackburn. In evening, Mr. Roupell first out on the 25-Blériot, followed by Lieuts. Allen and Stopford, and Small and Mr. Hoelscher, all doing straights with Mr. Blackburn. Then Mr. Cholmondeley went for circuits, tried to rise too quickly, and pancaked, coming into collision with one of a herd of "coos," breaking a strut.

Blériot School.—Monday's proceedings at the school last week were started at 5.30 a.m., when Mr. Metford tried out a school machine which had just been adjusted, and after flying one circuit at about 60 ft., handed the machine over to M. Teulade, who did a circuit, and then descending somewhat roughly damaged the landing chassis, with the result that the machine had to be returned to the sheds for repairs. Mr. Sacchi, meanwhile, had accomplished one good straight flight on L.B. 2.

Wednesday was very misty up to 6 a.m. When this cleared, Mr. Hall got two good straight flights and one circuit on L.B. 2, and Mr. Sacchi a couple of good straights on the same machine. In the evening M. Gaudillon made five rolls on L.B. 1, and is getting the tail well up. Mr. Welburn did two rolls across and back on L.B. 2, and Mr. Hall was doing straights. Mr. Sacchi had bad luck, only managing to get half-way across the ground when his motor stopped owing to accumulators running down.

Messrs. Sacchi and Hall out early Thursday on L.B. 2, the former doing four straights and the latter three circuits and two straights before the wind rose.

During Friday, a new motor having been fitted to L.B. 2, Mr. Metford took machine out to try before handing over to pupils, and finding it was pulling well, Messrs. Sacchi, Welburn, Hall and Teulade were all up for straights, Messrs. Sacchi and Hall also each doing a circuit. M. Gaudillon meanwhile did three rolls on L.B. 1, and is improving in his steering. Too windy Saturday morning for circuits, but Messrs. Sacchi, Welburn and Hall each did straights on L.B. 2.

Deperdussin School.—On Monday last week, day's work of school started with solo flights by R. W. Gill, who had passed successfully his *brevet* the previous week. Did neat circuits, after which Capt. Dawes, Brock, and Harrison doing straights on *brevet* machine. All did well, and made good landings. Capt. "X" rolling on taxi. In the evening R. W. Gill flying on *brevet* machine in good style. Nothing doing Tuesday morning, too bad for any school work. In the evening, Capt. Dawes, Brock, Harrison doing straights for about 30 mins. Lieut. Tucker rolling on taxi in excellent manner. Next day all pupils practising on *brevet*. Lieut. Tucker and Capt. "X" showing great improvement on taxi, Thursday, school work started early. R. W. Gill flying circuits on *brevet* machine, making both right and left turns, while Brock, Harrison, and Capt. Dawes doing straights on same machine.

Friday all pupils out making excellent progress. Brock and Harrison flying on *brevet*. Capt. "X" improving on taxi. Pupils out early Saturday with straights. Harrison showing great improvement, flying very straight and steadily and ready for circuits. In afternoon Lieut. Porte took out the new British-built 2-seater Deperdussin 60-h.p. Anzani and gave a splendid exhibition flight. Later in the evening he flew off grandly for Farnborough in 35 minutes with his machine, which is destined for the War Office.

Salisbury Plain.

Bristol Hangars.—Gordon England was first out Monday last week flying a couple of circuits, then taking up a passenger. Busted made a test flight in a school two-seater monoplane, Harrison afterwards going for a solo in this type of machine, completing a couple of circuits and landing very well.

In the evening Busted, with Harrison as passenger, flew over to the new Army School in one of the Bristol monoplanes, Mr. Valentine also flying over in another of the same type machines, afterwards both flying back to the sheds, Mr. Valentine finishing up by making a short solo round the sheds.

Tuesday, Busted was the only one out in the morning, making a solo in one of the monoplanes, he being again out in the evening making a long test flight, having a mechanic as passenger, later making a solo on the same machine. Pixton was on another monoplane, having an officer as passenger.

In a thick fog Gordon England was on Wednesday making a couple of solos on a tractor biplane, afterwards ascending with Pixton

as passenger, the fog preventing any further work. In the evening Busted made several flights on monoplanes, with and without passengers, and Pixton then set off with Mr. Fellows as passenger on one of the Bristol monoplanes and flew to Brooklands, making a splendid trip and arriving just under an hour after his departure.

Busted was out for a test Thursday on a monoplane, this being the only flight made. In the evening he was again out, as also were Messrs. Valentine and England.

Mr. Valentine was the first at work Friday, making a splendid solo flight, Busted also ascending with Harrison as passenger and completing several good circuits. In the evening, Busted was again flying one of the monoplanes, afterwards ascending on a similar machine. No flying Saturday morning, but Busted was out later on in the day making several flights, whilst Pixton was also making a solo, then taking Mr. Dacre for a flight.

Royal Flying Corps.—Tuesday morning was rather windy, but Major Brooke-Popham was out on the Avro for a short flight. In the evening also there was a rather strong breeze blowing, but Capt. Hamilton brought out the Deperdussin and went for a cross-country flight. He was followed by Major Brooke-Popham on the Avro, with Serjt. Ridd as passenger. The Deperdussin was first back, and landed by a spiral *vol plané* from a height of 2,000 ft. Five minutes later the Avro returned, and came down from a height of 1,800 ft., with the engine shut off.

On Wednesday morning, Capt. Hamilton was again first out on the Deperdussin, taking up a R.F.A. officer to observe the artillery firing. Next out was Major Brooke-Popham on the Avro with a passenger, and after this flying ceased owing to the rising wind. In the afternoon the Dunne biplane fitted with a Green engine was being tested in the hangar when the propeller broke.

In the evening, Capt. Hamilton was out on the Deperdussin, followed by Major Brooke-Popham on the Avro, who flew with a passenger to Farnborough.

There was no flying on Thursday morning on account of mist, but in the afternoon a two-seater Bristol monoplane was handed over to the Government. In the evening Capt. Hamilton was out on the Deperdussin taking up passengers, and at 6.55 p.m. the Avro arrived from Farnborough piloted by Major Brooke-Popham.

Capt. Hamilton was also out on Friday morning, but after a circular flight which finished with a steep *vol plané* no other air work was done. Capt. Hamilton was also out in the evening.

There was too much wind for flying on Saturday morning, but in the evening Capt. Hamilton on the Deperdussin made three very high flights. At 8.45 p.m. Mr. Cody arrived from Farnborough on his machine for the trials; he was flying at a height of 2,000 ft. There was no other flying owing to rain. No flying was possible on Sunday or Monday owing to the wind. The same cause prevented flying on Tuesday, when the corps was busy erecting biplane F7. In the afternoon the Martin Handasyde monoplane and the Avro biplane arrived at the Hangars for the trials.

Upavon.

EARLY Monday morning last week, Capt. Fulton made solos on Short 44 and Bristol F8. Lieut. Longmore, two flights on Short 44, one solo and once with Capt. Corder as passenger. Capt. Corder then flew Bristol F8. In the evening Lieut. Longmore made two flights on Short 44 taking S. S. Thomas first and then Serjt. Vagg for instruction. Capt. Fulton made two flights on Avro. During the evening there were several arrivals from Larkhill. Messrs. Busted and Harrison on the Bristol 14 monoplane, which is to take part in the forthcoming competition on Salisbury Plain, were the first; then came Valentine on a Bristol military two-seater, and Major Brooke-Popham on an Avro with Capt. Connor as passenger. It was a very favourable evening for aviation, being fine with little or no wind to speak of.

Next day, in the evening, Capt. Fulton made a solo on the Avro, and then took A. M. Hodgson as passenger. Capt. Gerrard then flew Short 44 with Capt. Corder as passenger. Lieut. Randall made one flight on Short 44.

Capt. Gerrard on Wednesday made two flights on Short 44, the second time taking Assistant Paymaster Lidderdale for tuition. Lieut. Randall flew Short 44. Capt. Fulton arrived from Farnborough on an Avro tractor biplane, this making the second machine of this description at the school.

In the early morning of Thursday, Capt. Fulton made four flights on the Avro he brought over the evening before, taking up in succession A.M.'s Hodgson, Seabrook, Dismore, and Warren. There was a strong wind in the evening, but Capt. Fulton made two successful flights on the Avro, and Lieut. Longmore three on the Short 44, one solo and once each with S. S. Thomas and Serjt. Vagg for tuition.

Weather unfavourable for flying Friday, and on Saturday, Capt. Gerrard made one flight on Short 44. Lieut. Longmore arrived from Farnborough on the new Renault-Maurice-Farman biplane, this being the first machine of that type at the school. Further flying was curtailed by heavy rain.

BRITISH NOTES OF THE WEEK.

THE ROYAL FLYING CORPS.

From the *London Gazette* of the 26th ult. :—

Special Reserve of Officers. Establishments. Royal Flying Corps. Military Wing.—The undermentioned to be Second Lieutenants (on probation). Dated July 27th, 1912: Thomas O'Brien Hubbard, Edward Hotchkiss, Herbert Dennis Cutler, and Douglas George Young.

Royal Flying Corps (Naval Wing).

IN the *London Gazette* on the 26th ult., was announced His Majesty's approval of the scale of emoluments of the officers and others serving in the Naval wing of the Royal Flying Corps. This scale is exactly the same as that for the military wing of the R.A.C., as given in our issue of April 27th, the only other difference being that the "Sergeant" in the latter is a "chief petty officer" in the former. The accompanying memorial states that the service of officers in the Royal Flying Corps, with the exception of service in the Reserve, will count as service in a ship of war at sea from the date of the Royal Aero Club's Certificate being obtained. It also states that an allowance of 5s. a day will be paid to the secretary of the commandant of the Central Flying School. The rates of pay are to date from April 1st last.

Hendon Meeting.

No contests were held at last Saturday's meeting up at Hendon, so the afternoon and evening were devoted to exhibition flights by Marcel Desoutter, Lewis Turner, and Jules Nardini. The weather was not all that could be desired, it being decidedly puffy early in the afternoon, but bettered somewhat later in the evening.

The first up was Desoutter, who ascended from the far end of the ground, near the railway embankment, on the Gordon-Bennett Blériot, at 3.45 p.m. He flew at a height of several hundred feet for ten minutes, and then executed a very nice *vol plané*. He did not land, but again ascended to a good height, incidentally racing a train during one of his laps. After this flight it was announced that he would do a speed test of four laps round the aerodrome. At the end of his four laps he gave a display of "stunt flying," including some close hops over some cinema men. While he was up, Lewis Turner put in a 10-minute flight on the Grahame-White-Farman. A few minutes after Turner had landed, Desoutter came down, having been up for 38 minutes. In the meanwhile, King Manoel, conducted by M. Simon, made a tour of inspection of the machines, and seemed to be very interested in the fitting of a Levasseur propeller on Nardini's machine. Nardini then made a short flight on his Deperdussin; Turner also put in a few circuits on the biplane.

Desoutter and Nardini then arranged a friendly little speed handicap of four laps, the former having 27 secs. start. This ended in a "win" for Desoutter—in fact he gained 1 sec. Another handicap was held immediately after, this time Desoutter getting 4 secs. start. Nardini still could not overhaul his rival, who gained 3 secs.!

At 6.20 p.m. Lieut. Porte came out on the new military 60-h.p. Anzani-Deperdussin two-seater. He was up for 6 mins., and just as he was descending, Nardini went up for a 5-minute flight. Desoutter then went up for an altitude test, and while he was rising, Lieut. Porte started for Farnborough on the Deperdussin. After being up for just half-an-hour, Desoutter landed at 7.5 p.m., having reached an altitude of 5,200 ft. No more flying was done beyond a few flights by Turner on the biplane.

First Marine Private Gets Certificate.

THE first private to qualify for the Royal Aero Club certificate at the Naval Flying School at Eastchurch is a "soldier and sailor too," Private J. Edmonds, of the Royal Marines. He has been serving under Commander Samson, and used one of the Short biplanes.

R.F.C. Experimenting with a Maxim.

SEVERAL interesting tests have been carried out recently by Mr. de Havilland, on a new biplane turned out of the Royal Airship Factory, which has been equipped with a Maxim gun. It is understood that the experiments have so far proved quite satisfactory.

Flying Over the Thames.

LONDONERS in the neighbourhood of the Thames on Saturday afternoon had the rare sight of seeing an aeroplane progressing up the river. This was the new Handley Page military monoplane, which had started from the works at Fairlop, in Essex, and was making its way to Brooklands. The course of the river was followed from Rainham to Putney Bridge and the whole distance of 58 miles from start to finish was covered in 55 mins.

Mr. Cody's Midnight Trip.

ON the biplane which he has built for the Military Trials, Mr. Cody, just before midnight on Saturday, took up two ladies for a trip over Laffan's Plain. He circled round the district several times, during which there were several flashes of lightning. He eventually landed within a few yards of his hangar.

Naval Aeroplanes at Dover.

ON the 25th ult. two biplanes arrived at the Whitfield Aerodrome near Dover, having been flown over from Eastchurch. They were a new H. Farman biplane with Lieut. Parke in charge and a Short tractor biplane piloted by Lieut. Grey. The machines stayed at Dover over night, and during the evening made one or two trial flights. On the following day Lieut. Grey carried some despatches to the Lancaster Regiment, in camp at Dymchurch.

Paris to London in a Hydro-Aeroplane.

ON the Donnet Leveque hydro-aeroplane Capt. Conneau, better known by his *nom de vol* of Andre Beaumont, started off from Juvisy on Friday last on a projected trip from Paris to London. He followed the Seine to Bezons, where he came down on the



"Flight" Copyright.

Mr. Claude Grahame-White flying his Henry Farman at Hendon, with Mr. Richard Gates as passenger. Note the distinctness of the two passengers seen in the photograph.

water after covering 36 miles. He intended to continue his journey along the Seine to Havre, cross the Channel, then keep round the English coast and up the Thames to Westminster, but the bad weather of the week-end has intervened and prevented any progress being made with this part of the programme.

Artist-Draughtsmen Wanted.

THERE are vacancies on the staff of FLIGHT or Artist-Draughtsmen able to sketch rapidly mechanical details, &c. Apply by letter to Editor, 44, St. Martin's Lane, W.C.

A Hydro-aeroplane versus Motor Boat.

AT Brighton, on Monday, an interesting race took place between Mr. Grahame-White's hydro-aeroplane and Mr. Harry Preston's new 55-foot cabin cruiser "My Lady Molly." The hydro-aeroplane had to give the motor boat 12½ secs. and had to go two rounds of the course, which was from Black Rock to the West of Hove and back, while "My Lady Molly" only had to make one round. Mr. Grahame-White just managed to win by about ten yards.

The Flying Cycle.

WE trust no readers of FLIGHT labour under any misapprehension as to the principles underlying the possibilities and impossibilities of flying by the aid of a push-bike. The rider of a bicycle, which may be suitably equipped with wings, might by his energy so propel the machine as to produce a sufficient velocity through the air to enable the aerodynamic reaction on the wings to lift the man and the machine off the ground. So soon as the machine is off the

ground, however, the propulsive force ceases, consequently the resultant flight can only be a glide to earth, and any abnormal prolongation of this little jump must essentially be attributed either to the vagaries of the prevailing wind or to the configuration of the ground.

Now Then, Airmen.

WHEN you are inclined to put on side, to "fancy" yourselves and your (as yet) potty achievements in the conquest of the air, remember that the frigate bird can easily wind off his 300 miles per hour. Also remember, that he has a wing-spread of some sixteen feet, that he merely weighs some eight pounds, and that this is about the top-notch attempted by the Creator. Where, then, will you come in, airmen?—*Maritime Review*.

Brereton has a Slight Mishap.

BRERETON gave some very fine flights at Malton Hospital Fête, making numerous circuits above the Fête Ground and round about Malton. Unfortunately in the last flight, he landed, after encountering an air pocket, in a cornfield, which caused the machine to upset and be damaged.

"Gamma" at the Isle of Wight.

EARLY on the morning of the 25th ult., the "Gamma," repaired after her recent accident, was brought out of her shed at Farnborough, and with a crew of five left for the south. After about an hour's run, she passed Portsmouth, and circled once or twice over the Isle of Wight before returning to Aldershot. The return trip was done in well under an hour.

FOREIGN AVIATION NEWS.

The Ae.C.F. Criterium.

THE Aero Club of France has decided that the competition for the Criterium shall be held from August 15th to December 31st, 1912, and they will give prizes amounting to 10,000 francs to the aviator who makes the longest flight without landing. The holder, George Fourny, is preparing to defend his title, and has made arrangements to fly, if necessary, for 16 hours. The present record is 11 hours 1 min.

From Mailly to St. Cyr.

HAVING completed their period of service in connection with artillery practice at Mailly Camp, Lieuts. Battini and Varcin returned to St. Cyr on the 25th, each officer carrying his mechanic on his M. Farman biplane. On the way they were surprised by a rainstorm and had to land for a time at Nangis.

From Rheims to Dunkerque.

ON the 24th ult., Lieut. Pierra on a Farman biplane left Rheims, and later arrived at Dunkerque, having accomplished a trip of about 350 kiloms, with a couple of landings *en route*.

A Blériot Escadrille at Work.

ON their Blériot machines Lieut. Bellemois, de Sylvestre and de la Morlaye, on Monday started in company from Villet, and made a reconnaissance of 1 hour 45 mins. duration over about 150 kiloms. of country round Epinal, Rambervillers, Charmes and Minecourt.

Flying New Machine Home.

HAVING taken delivery of a new Maurice Farman biplane at Buc on the 26th ult., Sergeant Beausure de Seyssel, accompanied by his sapper mechanic, flew back to his headquarters at Verdun.

An Aeroplane in a Garage.

A unique experiment was carried out by Mr. Henry Farman on his new small biplane on the 23rd ult. Late in the evening he left Chalons Camp and flew to Paris, landing on some very rough ground by Noisy-le-Grand. With the help of a peasant he then dismantled the machine so that the overall width was only 3 metres, and it was towed by a motor car *via* the Rue de Rivoli and the Champs Elysees to the Palais de l'Automobile, where it was garaged. The speed of the new machine is given as 113 k.p.h., and it is said to be able to climb 100 metres in 50 secs.

The A.C.F. Hydro-Aeroplane Contest.

THE hydro-aeroplane competition, arranged by the Automobile Club of France, to take place at St. Malo on August 24th, 25th and 26th, has drawn a round dozen of entries, including 1 R.E.P., 1 Astra-Train, 1 Nieuport, 2 Sanchez-Besa, 1 Borel, 1 Donnet-Leveque, 1 Deperdussin, 1 Maurice Farman, 1 Astra, and 2 Paulhan.

Wireless Telegraphy Experiments in France.

AFTER having successfully transmitted wireless telegraph messages from his Farman aeroplane from St. Cyr to Meaux, Lieut. Mauger-Devarennnes is experimenting with a view to sending messages over greater distances, and hopes eventually to be able to send them over distances 150 to 200 kilometres.

New Deperdussin Military Pilots.

ON the 23rd ult., Lieut. Mouchard completed his test for superior certificate, arriving at the Betheney Aerodrome after a flight of an hour and a-half from St. Cyr, and on the 26th, Lieut. Sauleillon made his first tests over a course comprising Rheims, Vouziers, Mailly Camp and back.

New R.E.P. Superior Pilot.

ON the 24th ult. Granel made the first test for his superior certificate, on a course along the valley of the Aube, and he completed the tests on the 26th. Having been compelled by the storm to spend the intervening day at Troyes.

Promising Borel Pilots.

LIEUT. RONIN, after only two months' training, made some tests for his military *brevet* on the 23rd ult. on a Borel-Martin monoplane over a course from Buc to Chartres, Orleans and back. At the same school at Buc Lieut. Garnier is also qualifying for this special certificate.

A Train Hydro-Aeroplane.

CONSIDERABLE success has been obtained by the latest Train monoplane at the hands of military officers at Mourmelon, and M. Train has lately been giving his attention to hydro-aeroplaning. The hydro-monoplane built for him by the Astra Company made some very satisfactory trial flights at Meulan during the past few days and one of them has been entered for the A.C.F. Competition at St. Malo.

Villacoublay to Mourmelon and Back.

IN his test for a superior *brevet*, Lieut. Escaille on a Nieuport twice made the trip from Villacoublay to Mourmelon and back; on the second occasion, on the 24th ult., doing the double trip in one day.

Long Trips on Blériots.

FLYING for their superior *brevets*, Capt. Faure and Lieut. Jacquet, on Blériot monoplanes on the 24th ult., flew from Tours to Etampes, and Robert Pasquier, starting from Etampes at 5.40, reached Trouville at 7.25. He started back on the following day, but was brought down at Auneau by the storm, and had to stop for the night, the machine being pegged down in the field. He finished his journey to Etampes the next day.

A Two-Hour Trip on a Train Monoplane.

AT Mourmelon on the 25th ult., Lieut. Levasseur, on a Train monoplane, made a two hours' trip at a very high altitude passing over the circuit, Chalons, Vitry le Francois, Barleduc and back.

French Naval Aviation.

FROM the aeroplane mother ship "Foudre" at St. Raphael on Sunday, Ensign Delage was testing the Nieuport hydro-aeroplane and made one or two good flights. A Farman hydro-aeroplane is being got ready for testing, and work is being rapidly pushed forward in the preparation of the Naval aerodrome at Frejus.

Belgian Hydro-Aeroplane Competition Postponed.

THE competition for hydro-aeroplanes which was to have been held from September 1st to the 9th at Tamise has been postponed to the following week and will be held from the 7th to the 16th.

Two German Flyers at Nancy.

SOME excitement was caused at Nomeny, near Nancy, on Tuesday of last week by the arrival of two German aviators from the military aerodrome at Metz. They explained that they had been forced to descend by an approaching storm. Finding they were trespassing they wanted to get away again but were detained and stayed at the local hotel. The machine was pegged down in the field, and after being questioned the Germans were allowed to get away the next morning, and reached Metz in 13 minutes.

German Aerial Volunteer Corps.

THE German Minister of War has recently sanctioned the formation of a corps of volunteer aviators, very much on the lines of the motor volunteers. The members, who must be of German nationality and possess a German certificate, will place themselves at the disposal of the military authorities in time of war, and will also be available for manoeuvres, &c. It is probable that some 15 to 20 members will take part in the forthcoming manoeuvres.

A German Aviette.

ACCORDING to a message from Berlin, Herr Brann, an engineer, of Dre-den, has succeeded in "flying" on a machine driven by muscular energy alone two metres at a height of 50 centimetres at the Lindenthal Aerodrome.

Austrian Emperor and Record Flyer.

AS showing his great interest in aviation the Austrian Emperor recently gave an audience to Lieut. Blaschke whose record altitude flights were a feature of the Vienna Meeting. His Majesty also enquired into the officer's circumstances, and hearing that he was engaged at once added a necessary £1,000 to complete the bride's dowry so that the marriage might not be further delayed. Lieut. Blaschke's fiancée, Fraulien von Osakay, has made several flights with her future husband.

A Double German Fatality.

WHILE flying on the outskirts of Moosach, near Munich, a German aviator, Fischer, and his mechanic, Kugler, fell from a considerable height, and both were killed on the spot.

Another German Aviatress.

GERMANY now boasts a third lady pilot, Fraulein Lottie Molhring having qualified for her certificate at Rotthausen on the 15th ult.

The Berlin-St. Petersburg Flight.

WHILE continuing his flight from Berlin to St. Petersburg, Abramovitch on Saturday last had a fall at Walk, between Riga and Pleskau. Pilot and passenger escaped injury, but the machine was so damaged that it will take a week to effect repairs.

A Russian Aeroplane Competition.

THE Russian Minister of War is organising a competition for Russian-built aeroplanes, to be held from August 23rd to October 3rd, for prizes of 30,000 roubles (£3,174), 15,000 and 10,000 roubles. The machines will be required to carry two passengers and all instruments, &c., together with sufficient supplies for a three hours' flight. They will also have to attain a height of 500 metres in 15 minutes at least, reach a speed of 80 k.p.h., and make a non-stop flight of 1½ hours.

The Italian National Fund

THE Treasurers of the Italian National Fund have received a further sum of £1,179 which has been collected in the Italian schools to add to the £2,680 already in hand. The Italian colony at Monte Video in Uruguay has also forwarded £1,000 to the fund.

Aeroplanes at American Manœuvres.

FOR the first time the U.S. Army will use aeroplanes at the manœuvres which are to be held round New York from the 9th to 21st inst. Four officers, Capt. C. de Chandler, with Lieuts. T. de W. Milling, H. Arnold, and R. C. Kirtland, with a couple of Wright machines, are to be attached to the forces for scouting purposes.

Another A.A.A. Formed.

AS the result of a meeting of some 30 pilots and pupils at the Aero Club of Illinois' flying ground at Chicago recently, it has been decided to form the American Aviators' Association. The aim of the new society is to make aviation safer, and to this end it will establish a bureau for the gathering of data regarding unusual conditions met with in the air, and will disseminate this knowledge among the members. It will also seek to dissuade members from taking unnecessary chances.

Wright Co. and Hydro-aeroplanes.

IN view of the popularity of hydro-aeroplaning, the Wright Company has established a station at Glen Head, L.I., on Hempstead Bay, so that New Yorkers may have an opportunity of trying this sport. A school is also being started.

Gould Prize Competition Abandoned.

OWING to the fact that two machines were not able to compete in this competition, organised under the auspices of the *Scientific American*, it was decided to abandon it. The Gould prize of \$15,000 was offered for a machine with two motors capable of working together or independently. One competitor, Mr. Howard Gill, had his machine ready.

Another American Aviatress.

ON July 16th, at the Cicero Field, Chicago, Miss Katherine Stimson qualified for a pilot's certificate on a Wright biplane. She was taught by Max Lillie.

American Circuit Abandoned.

APART from Chicago, Dayton and Akron which offered \$25,000, \$10,000 and \$3,000 respectively, practically no other cities on the route of the proposed American circuit took much interest in the affair, and in consequence it has been decided by the Aero Club of America not to proceed further with it.

A Balloon Racing Record in America.

SEVEN balloons started from Kansas City on the 27th ult. in a balloon race for the American National Cup. The provisional results are as follows:—

- "Uncle Sam," pilot Honeywell, Virginia, 923 miles.
- "Million Population II," pilot McCullough, Spring Cren (Wis.), 375 miles.
- "Kansas City II," pilot Watts, Belleville (Mich.), 640 miles.
- "Good Year," pilot Bambengh, Polo, (Ill.), 340 miles.
- "Cole," pilot Custer, Mai-Gregor (Iowa), 325 miles.
- "Drifter," pilot Holtz, Newberlin (Wis.), 425 miles.
- "Million Population I," Nora, 350 miles.
























































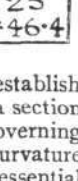
Hydro-Aeroplanes for Japanese Navy.

AN order has recently been placed by the Japanese Naval authorities with the Curtiss Aeroplane Co. for three hydro-aeroplanes, and three Japanese naval officers have been sent to Hammondsport, New York, for instruction.



Cal Rogers, the first American cross-Continental aviator, who was killed at Long Beach on April 22nd. On the right is a photograph of the wrecked machine showing where it fell in the edge of the surf

THE RESISTANCE OF STRUTS.

										
Nº 39 R=5.7	Nº 40 R=5.7	Nº 36 R=6	Nº 37 R=6	Nº 50 R=6	Nº 53 R=6	Nº 54 R=6	Nº 18 R=6.3	Nº 41 R=6.3	Nº 45 R=6.3	Nº 19 R=6.7
										
Nº 42 R=6.7	Nº 44 R=6.7	Nº 51 R=6.7	Nº 32 R=7	Nº 31 R=7.3	Nº 35 R=7.3	Nº 43 R=7.3	Nº 47 R=7.3	Nº 48 R=7.3	Nº 52 R=7.3	Nº 49 R=7.6
										
Nº 30 R=8.3	Nº 34 R=8.3	Nº 46 R=8.7	Nº 33 R=9.3	Nº 17 R=10.3	Nº 6 R=10.6	Nº 5 R=11.3	Nº 16 R=11.3	Nº 29 R=11.4	Nº 21 R=12.3	Nº 24 R=12.3
										
Nº 4 R=12.7	Nº 32 R=13	Nº 38 R=13.3	Nº 2 R=14	Nº 22 R=14	Nº 1 R=14.4	Nº 3 R=14.7	Nº 15 R=16.4	Nº 28 R=16.4	Nº 11 R=17	Nº 12 R=17
										
Nº 7 R=18.6	Nº 20 R=19.4	Nº 26 R=20	Nº 23 R=20.4	Nº 9 R=23	Nº 8 R=23.3	Nº 10 R=23.3	Nº 22 R=24.4	Nº 27 R=26.3	Nº 13 R=28	Nº 14 R=36.4
										
Nº 25 R=46.4										

In the above diagram the results of the tests on struts—presented to the Aeronautical Society by Mr. Alec Ogilvie and published in **FLIGHT** on June 15th—have been re-arranged to show the struts in order of resistance. Each strut is numbered as in the original results and the resistance, R, in pounds per hundred foot of strut at 40 m.p.h. is likewise given. All the struts were one inch wide, while the fore and aft length varied from two diameters to four diameters. It is singularly interesting to study the above arrange-

ment, because it shows how extraordinarily difficult it is to establish any fixed principle on which to judge whether the lines of a section are good or bad. So far as we can see at present the governing characteristic factor in this matter is the rate of change of curvature in the run or after part of the strut. It appears to be very essential that the divided air stream should begin to close slowly, which point attended to, the absence of an extreme tail appears to be insignificant.

Famous Flyers at Hendon.

WE understand that the Grahame-White Aviation Co., taking advantage of their presence in England for the British military tests, have made arrangements with the famous flyers, Jules Vedrines and Prevost, to fly at Hendon to-day (Saturday) and Monday next.

Vedrines will be flying a 100-h.p. British-built Deperdussin, and Prevost will be on the same make of machine. The other flyers who will most likely be seen are Moineau on the Breguet, Verrier on the Maurice Farman, Valentine on a Bristol, and Sippe on a Hanriot.

Models

Conducted by V. E. JOHNSON, M.A.

The Power-Driven Model Contest at Hendon.

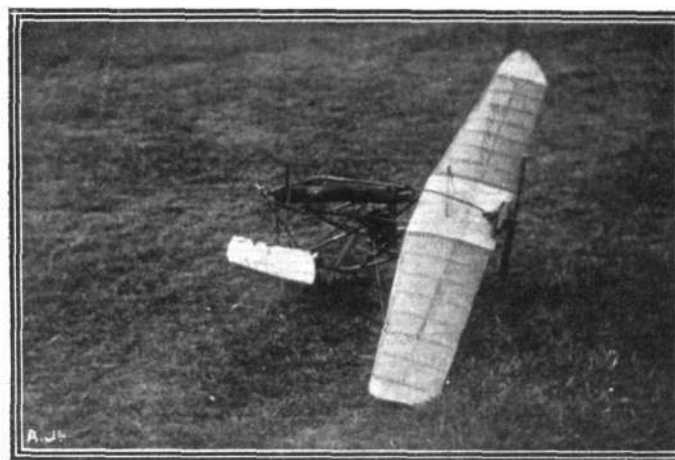
THE Grahame-White power-driven competition for models rising from the ground under their own power—the motive power being either steam, petrol or carbonic acid gas—only brought forward five entrants. Of these, three failed to put in an appearance, and in the end there were only two competitors—Mr. Stanger, with his petrol-driven model, and Mr. Desoutter, with his Nieuport model and CO₂ plant. The former failed to quit the ground, one of the cylinders refusing to behave itself properly, and Mr. Desoutter was left the winner with two short flights of about 8 and 12 secs. respectively—the latter of which ended somewhat disastrously for the machine, in a propeller splintered into three pieces, a buckled-up chassis, and a broken fuselage. We give this week an illustration of Mr. H. H. Groves' well-known steam-driven model *hors de combat*. The model has, however, since been repaired, and is once more ready to do battle with the elements. There always comes a time to everyone experimenting with power-driven models flying, or intended to fly, over land, when he must invariably ask himself, is the game worth the candle? Personally I candidly admit that I do not think it is, and I know that I am not alone in that opinion. Mr. Groves is turning his attention to power-driven model hydroplanes (hydroplanes not hydro-aeroplanes) and before we had received his letter we had decided to do the same thing—although not with the same end in view.

From the power-driven hydroplane—to the power-driven hydro-aeroplane is but a step and it is in this direction that we look for the development of the power-driven model, i.e., model motor boats, model hydroplanes, model hydro-aeroplanes. The reason is almost too obvious to require stating—given a large enough sheet of water—the power-driven model hydro-aeroplane has always the same even and yielding surface on which to descend—however badly it may alight—the damage is likely to be only slight—whereas mother earth is not unfrequently wondrous hard and rugged. There are, we know from personal experience, plenty of aeromodellists about—who hold the opinion quite freely expressed that if they had only a good power plant—they would soon overcome all difficulties of stability and landing. In a matter of this kind it is, however, perhaps best to do it first and talk about it afterwards.

The Desoutter Power Plant for Models.

Previous to seeing Mr. C. Desoutter's model at Hendon, we had seen and tested the plant at 12, New Burlington Street, W., where it can now be obtained. The results which we obtained with it were in every respect perfectly satisfactory. There is no difficulty in obtaining with it a duration of from three-quarters of a minute to a minute at a sufficient thrust to fly a suitable well-built model. The following particulars re Mr. Desoutter's model and plant will, we feel sure, prove of especial interest to our readers: Weight of engine, including 27 ins. propeller, $\frac{3}{4}$ lb.; weight of CO₂ cylinder fully charged, 2½ lbs.; weight of regulator, including hot-water cylinder (full), $\frac{1}{2}$ lb. Working at a 4 lbs. thrust, the duration is 40 secs., and

working at a 3 lbs. thrust the duration is about a minute [this we have personally verified]. This duration could, of course, be extended by carrying more than one cylinder, two such on a well-constructed model could undoubtedly be carried. In the case of a longer duration no doubt some form of automatic regulator would have to be employed—just the same as I have found necessary in the case of a flash boiler steam-driven plant. The first flight obtained with a Desoutter plant was in (above all places in the world) George Street, Hanover Square. The model was a one-quarter scale two-seater Nieuport (see illustration). The cylinder was of spun copper and not capable



Mr. H. H. Groves' steam model *hors de combat*. The photograph was taken prior to the model being moved in any way.

of sustaining a very high pressure. The test applied by Mr. Desoutter was, we believe, the making of a dent in the copper and when the dent flattened out—under pressure—he thought it unwise to try more, a method perhaps not highly scientific but certainly ingenious. The flight already referred to ended in a collision with railings and was about 90 ft. in length. The type of engine, as can be seen from the illustration, is a single cylinder—double acting. The stroke is 32 mm., the bore 35 mm. The material magnesium and steel. The complete weight of the model in flying condition, 8 lbs.; span, 8 ft. 6 ins.; area of main plane, 10 sq. ft.; area of non-lifting tail, 2½ sq. ft.; diameter of propeller, 27 ins.; pitch of propeller, 22 ins.

The short duration of the first flight at Hendon was due to the model rising too steeply, the model being over-elevated. In the second flight this was corrected, but the regulator was not quite in



MR. C. DESOUTTER'S MODEL NIEUPORT.—On the left enlarged view of the chassis, motor, &c., and on the right the Desoutter engine.

order, and the model came down apparently from lack of further power supply; unfortunately it landed badly, and any further attempts were *pro tem.* impossible.

A Proposal.

Reference has already been made to the far greater suitability of a water to a land surface for power-driven models to land on; and much might be said with respect to the greater interest attached to hydro-aeroplaning as a sport, as opposed to simply aeroplaning, the former combining as it does two forms of sport at once. In hydro-aeroplaning both the aeromodelist and the owner of a model motor boat, &c., meet, as it were, at a half-way house. The same motive power (with some modification, it is true, but of the same type) can be used alike for motor boats, for hydroplanes and for hydro-aeroplanes; and, given a sufficiently large sheet of water, experiments can be conducted with all three types, with a reasonable amount of security so far as the model is concerned. Bearing these and other facts of a similar character in mind, we submit to the readers of FLIGHT a proposal for the formation of a model aquaplane club, limited to power-driven hydroplanes, motor boats, and hydro-aeroplanes, the subscription to the said club to be *not less than* a guinea a year, as without proper flying rights, &c., over a suitable sheet of water the club would be doomed to failure at the outset. We shall be very pleased to hear from the readers of FLIGHT their opinion of the foregoing.

The Wakefield Competition.

This competition was also held at the London Aerodrome on the same day as the power-driven one, which it preceded. A really fine set of models competed, and it is a matter of much regret that one was quite unable to see them at their best owing to a very gusty and tricky wind which was blowing. A wind which not content with varying greatly in velocity, varied still more so in direction, and considerable difficulty was experienced in some cases in getting the models off. The stability shown by several of the models was extremely good, and some excellent flights were made. An improvement which might be made in the contest would be to abolish test A altogether as a separate test (*i.e.*, 50 marks for shortest run before rising), and let every model *qualify* which rises within a certain distance. On working out the results after the contest the judges found that the length of run was a very preponderating factor in placing the competitors, and, after all, if a model rises, say, within 12 ft. it cannot be said to be a matter of vital importance whether that distance be 4 ft. or 10 ft. The irregularities of the wind at the time the contest was on prevented the gliding angle being taken

at all. The afternoon is very often quite unsuitable for model flying otherwise than of a spectacular character, whereas the evening—the early evening that is—is frequently much calmer and there would certainly be many advantages in holding some of the competitions then instead of earlier in the day when the atmospheric conditions are less favourable.

The Scouts' Model Competition.

During the time that this was in progress I was personally engaged with the other judges in the arduous task of working out the results of the Wakefield Competition, and thus saw but little of it. I saw, however, from the results, that a flight of some 250 yards had been made by the winner, which is a very good performance indeed, and one which should certainly do much to encourage brother Scouts to try and do likewise. The greatest interest was shown in the various contests by the numerous spectators present, and there is not the slightest doubt that good model flying is well capable of providing an excellent form of entertainment, and more of it might be seen with advantage.

Replies in Brief.

H. LEACH.—We should say a 9 ft. span was scarcely sufficient—probably from 11 to 12 ft. would be preferable—you do not give sufficient particulars for a more exact answer. The diameter of your propeller is at least 8 ins. too small.

B. DENNIS.—From the information you give it is impossible to say the exact size of rudder and tail but both should (probably) be rather large, the former (say) 6 sq. ins. and the latter 24.

E. N. L. RAYMOND.—The principle has been tried with partial success, but is far inferior to a proper pressure-fed benzoline blow lamp and flash boiler using water. Ether *has* been used in the latter type instead of water—but we should most strongly advise you not to try it—without having first made your will.

Queries.

C. J. TEMPERLEY is thinking of fitting his model with two propellers fixed together in same position as on the Loritskoy monoplane (propellers unconnected), he wishes to know if the idea is feasible, or whether the rearmount one does little or no propelling. His idea is to obtain a small propeller diameter and high efficiency at the same time.

L. J. JACQUES wishes to obtain scale drawings of the Bristol monoplane (single or double seater).

R. RICHARDS desires to know the best diameter, &c., for propeller for a biplane, 2 ft. 6 in. span and 2 ft. in length.

THE KITE AND MODEL AEROPLANE ASSOCIATION.

OFFICIAL NOTICES.

British Model Records.

Hand-launched	{ Distance ...	A. E. Woollard	477 yards.
	{ Duration ...	A. F. Houlberg	89 secs.
Off ground	{ Distance ...	F. W. Jannaway	84 yards.
	{ Duration ...	G. Rowlands	30 secs.

Competitions.—London Aerodrome Meeting.—The Association held a model meeting at the London Aerodrome, Hendon, on Thursday, July 25th, at the invitation of Mr. C. Grahame-White. Event I. The Wakefield Competition for models rising off ground under their own power. There was a splendid entry, and the marks and placing of the first six were:—

Place.	Competitor.	Machine.	Marks.
1.	R. Stedman (Aerial Engineering Works)	Aerial biplane	171
2.	G. Rowlands	Rowlands monoplane	163
3.	H. Bate	Tresto biplane	162
4.	A. F. Houlberg	Houlberg biplane	152
5.	G. P. Bragg-Smith	Bragg-Smith biplane	138
6.	T. Ockenden	Fairey biplane	134

Mr. Stedman therefore holds the gold cup and won the gold medal presented by Alderman Sir Charles Wakefield, D.L., J.P. Mr. Rowlands won the silver medal of the association, and Mr. H. Bate, of Hove, the bronze medal. The special rising board was supplied by Messrs. F. J. Stedman and Sons, of Balham. Event II.—The Grahame-White Power-Driven Competition for silver trophy of a monoplane, presented by Mr. C. Grahame-White. For this event there were five entries, but only two starters, the result being 1st, Charles Desoutter, who flew a monoplane driven by carbolic gas engine of 3-h.p., total weight, 8 lbs.; 2nd, D. Stanger, Stanger monoplane, driven by petrol engine of 13-h.p., total weight, 17½ lbs. Mr. Desoutter therefore won the handsome trophy, the 2nd and 3rd prizes being withheld. Event III.—Scouts' competition for longest flight, for Grahame-White trophy; 2nd and 3rd prizes bound volumes, presented by the editor of *Scout*. Results: 1. Patrol leader G. Wilde (1st Moseley troop, Birmingham), with 247½ yards; 2. Patrol leader R. G. Mealands (1st East Putney troop, 199½ yards); 3. Patrol leader R. W. Prance, 194 yards. Judges: Col. F. C. Trollope, Major B. Baden-Powell, Messrs. T. W. K. Clarke, A. F. A. S., T. O. B. Hubbard, V. E. Johnson, M.A., E. W. Twining, F. Pringuer, and H. W. Akehurst, hon. sec. Capt. Tyrer presented the prizes to the winners, on behalf of Mr. C. Grahame-White, who sent a message to say he regretted being unable to be present himself. He hoped to see more power-driven model contests, this being the first held in England.

Greenford Meeting.—Saturday, the 27th, the third competition for the

Gamage Cup took place on the 100 Acre Field, Greenford, and it was most keenly contested, 30 out of 34 competitors flying. Results of the first six:—

Place.	Competitor.	Machine.	Distance.
1.	R. B. C. Noorduyn (Rotterdam Model Aero Club)	Noorduyn mono. type X	630 yards
2.	F. Whitworth (Blackheath)	Eagle monoplane	626 "
3.	C. B. Ridley (Thames Ditton)	Ridleyplane monoplane	418 "
4.	J. Dollittle (Walworth)	Gnat monoplane	411 "
5.	A. Cannell (Harlesden)	0-1-P2 monoplane	400 "
6.	J. McBirnie (Tottenham)	Birmac monoplane	392 "

The cup therefore goes to Holland for the year. The judges were Mr. E. W. Twining, Mr. M. Christich, Mr. B. J. Kirchner and Mr. W. H. Akehurst (hon. sec.). Mrs. W. H. Akehurst gave away the prizes, and in handing the handsome challenge cup and gold medal, presented by Mr. A. W. Gamage, to the winner congratulated him on having come over and carrying off the cup, he accepting same amid a cheer raised for the Rotterdam Model Aero Club. Messrs. F. Whitworth and C. B. Ridley took the silver and bronze medal of the Association. Mr. R. C. B. Noorduyn, in returning thanks for the reception accorded him, said he would like to say how fair the competition had been carried out, and that he would be able to state that the English modelists were true sportsmen, and that he would come over again for other competitions, owing to the great fairness in which he had been treated by the judges. A vote of thanks to Mrs. Akehurst brought the competition to a close. An interesting 50 to 1 winder was used with great success by Mr. Stedman. Hydro-aeroplane competition, August 10th. Entries should reach the secretary by to-day (Saturday).

Model Competition, on 100 Acre Field, Greenford; station; Perivale Halt (G.W.R.), via Westbourne Park, August 17th, at 3 o'clock. Longest flight and stability competition (open to the world). Prizes: 1st, The Association Silver Challenge Cup and Gold Medal (previous holders, Mr. C. Fairey, 1910; Mr. G. Rowlands, 1911); 2nd, silver medal; 3rd, bronze medal. Free to members; non-members, entrance fee, 2s. 6d. Maximum marks, 100 each for longest flight and general stability. An additional 50 marks will be awarded for models starting solely under their own power off the ground. Rules: 1. Competitors may submit aeroplane models of any kind. 2. Models must not weigh less than 4 ounces. 3. Competitors must be at the judges' flag at 2.45. Those not present at that time will be disqualified. 4. Stability, both longitudinal and lateral, will be noted by the judges and taken into consideration in their award. 5. Models may be started by hand or under their own power. 6. Each competitor is entitled to three trials. Entries close last post Saturday, August 10th.

27, Victory Road, Wimbledon.

W. H. AKEHURST Hon. Sec

PROGRESS OF FLIGHT ABOUT THE COUNTRY.

Model Clubs: Name of District only given. In brackets: Secretary's address.

Notes regarding Clubs must reach the Editor of FLIGHT, 44, St. Martin's Lane, London, W.C., by first post Tuesday at latest.

Aero-Models Assoc. (N. Branch) (15, HIGHGATE AVENUE, N.).

FIRST monthly competition Saturday last, Finchley. Duration and 1st prize won by M. B. Ross, 60½ secs.; 2nd prize, B. Brown, 52½. Several other members flying well, including Messrs. W. E. Waring and F. J. Hindsley with tractors. The 79 yards attained by Mr. Hindsley, and mentioned in last week's FLIGHT, was with a tractor. On Saturday Mr. Waring obtained flights up to 130 yards, and of 17½, 18½, and 19½ secs. duration with a tractor. To-day, Saturday, ¼-mile relay race by two teams of members. Circular course. Members are requested to be on ground before 3 p.m., to make all necessary preparations and trials.

Aldershot Aero Club (37, ALEXANDRA ROAD).

FLYING next Wednesday and Saturday at Long Valley.

Bath and Somerset Aero Club (11, ELM PLACE).

OPEN model aeroplane competition at Claverton aero camp, August 10th, at 3.30 p.m. (weather permitting). Send to the hon. sec. for entry form and particulars. 6 classes. Last day for entries, August 7th.

Birmingham Aero Club (8, FREDERICK ROAD, EDGBASTON).

At club aerodrome Mr. McManus made flights over 250 yards (R.F.G. mono.); Mr. G. Haddon Wood 180 yards. Mr. G. Rogers flying single-propeller mono. August Bank Holiday, inter-club contest.

Blackheath Aero Club (48, HAFTON ROAD, CATFORD, S.E.).

DISTANCE and duration records of club have both been broken—the former by Mr. F. Whitworth, with 624 yards, at Greenford, on Saturday; and the latter by Mr. A. E. Woollard, 90 secs., at Grove Park, July 23rd. Mr. Dollittle obtained duration of 81 secs. at Greenford. Members of East Ham Club experimenting with a waterplane. Flying at Blackheath and Grove Park as usual next week-end.

Brighton and District ("KINGSLEIGH," KINGSWAY, HOVE).

DURATION competition, Bank Holiday; 30s. in prizes.

Bristol Model Flying (3, ROYAL YORK CRESCENT, CLIFTON).

JULY 24th and 27th, long flights and glides by Messrs. Howse (38 secs.), Smith, Smallcombe, Lee, Haines, Tinson (glide, 400 ft.), and Tivy (glide, 25 secs.). Meeting to-day (Saturday) at Sea Walls at 3 p.m.

Coventry Aero Building Soc. (22, KINGSTON RD., EARLSDON).

MEMBERS of the society assisted as stewards at Mr. Hucks' visit to Coventry on Saturday, 27th. Several gave excellent exhibitions of model flight. August Holiday, team competing at Birmingham Aero Club inter-competition.

Croydon and District Aero Club (Sec., 158, HIGH STREET).

JULY 25TH, C. Smither obtained duration 37 secs. (got off in 6-ft. run). Others flying during week: Messrs. Plummer, Roden, Bell, Jarvis, Dr. McMunn and Sanders. Mr. H. Smither, with single-screw tractor r.o.g., July 28th, obtained flight 250 yards, a club record.

Dover Model AeC ("OAKVILLE," GODWYNE ROAD, DOVER).

AUGUST Bank Holiday, Folkestone model competitions for distance, duration, and altitude. Club flying meeting at Northfall meadow, 3.30 p.m. Committee meeting, 7.30 p.m.

Folkestone Model Aero Club (25, BOURNEMOUTH ROAD).

JULY 20th, Mr. B. Rolfe broke club duration record with 60 secs.; many others over 50 secs. Previous record, Mr. S. A. Black, 40 secs. August Bank Holiday, three competitions for prizes—distance, duration, and altitude—at Park Farm, at 3 o'clock.

Hackney and District (THE HOLLIES, JENNER ROAD, N.).

SATURDAY, Mr. Louch broke duration club record (2-oz. model) with 83 secs. Longstaffe duration propellers (carved) won by Mr. Gittus (0-1-P2-1) with 233 points, Mr. Dore being second (1-1-0-P2) with 220. Other official durations: Gittus 50, Dore 55, Carter 69, Marmin 35, Burton 25. Longstaffe's steam-driven monoplane, weighing 4½ lbs., hopped off the ground during trials this week. Spensley Hall meeting postponed for August.

Maidenhead (FORD'S COTTAGE, PINKNEYS GREEN, MAIDENHEAD).

Good flying during week by Vevers, Laker, Humphries Tucker, and others. Tucker showing wonderful improvement. R. Vevers holds club duration record with 39 secs. Flying to-day (Saturday) at 5.30.

Paddington and Districts (77, SWINDERLY ROAD, WEMBLEY).

SATURDAY, in Gamage Cup Contest, Mr. Cannell obtained 5th place, others nowhere. Club duration averages now stand as follows: A. Cannell, 63½ secs.; F. Lane, 52½; C. Dutton, 41; C. Chalfont, 37; M. Levy, 36½; W. Evans, 35; Woolley, 33½; C. Levy, 31½; T. Carter, 31½. Three new members elected, viz., Mr. E. C. Yarnold, Mr. T. Cleverley, and Mr. W. Phillips. Flying to-day (Saturday) in fields top of Eagle Road, Wembley, as usual. Certificate trials.

Reigate, Redhill & District ("THE COTTAGE," LADBROKE RD.).

FLYING during week by Messrs. Burghope, W. H. Norton, May, Lewis, and Wyborn (Earlswood); J. L. Sutton (Gatton Park). H. V. May got 85 secs. with 4½-oz. 1-1-P2 on six strands a side of 4-in. strip. Mr. W. H. Norton tuning up 19-oz. 1-1-P2 R.O.G. Mr. J. L. Sutton got 410 yards at Horley Lodge, Salford; Mr. W. H. Norton, 150 yards (3-oz. R.O.G. 1-1-P2). Flying, Nutfield Sports, Bank Holiday.

Scottish Ae.S. Model Aero Club (6, McLELLAN STREET, GOVAN).

FLYING meeting to-day, Saturday, at Paisley racecourse, at 3.15 p.m. Next Saturday, hydro-aeroplane meeting at pond, Whiteinch Park. A big competition for this class of model will be held soon; also a competition for self-rising models.

Sheffield Model Aero Club (35, PENRHYN ROAD, SHEFFIELD).

MEETING August 5th, at 2 p.m., Bent's road or Marsh Farm, Ecclesall. Events, as already published in FLIGHT. Also first Model Aerial Derby from Brincliffe Rifle Range, Broad Elms Lane, to Marsh Farm, High Lane, Ecclesall, or reverse, according to wind.

CORRESPONDENCE.

Correspondents communicating with regard to letters which have appeared in FLIGHT, would much facilitate ready reference by quoting the number of each letter.

Automatic versus Inherent Stability.

[1606] I was much interested in the discussion of my article, "Automatic versus Inherent Stability," which appeared in your issue of July 6th. As this subject is one of greatest importance I make bold to ask for more of your valuable space in order to answer my critics.

In the first place let me say that, primarily, my idea in writing my article was to save some misguided enthusiast bitter disappointment. I have hardly visited an aerodrome in France or America where one or more hangars were not occupied by men who had never flown and yet who were trying to perfect the stability of the aeroplane by introducing some mechanical device to do what the aviator does at present. Most of these cases were nothing short of pathetic. Mr. Ernest Warde-Fox, it seems to me, hits the nail on the head in his reply (1592) to my article when he says "it is all very well for theoreticians to evolve elaborate schemes for providing and fitting gyroscopic arrangements to aeroplanes for purposes of assuring lateral stability, but it is undoubtedly the practical man who knows best what is wanted, although I do not for a moment suggest that he is always the man to supply the want."

In spite of the fact that I have had a college engineering education and considerable engineering experience, and have studied the problem of the aeroplane very closely for over a year and have been interested in it ever since I can remember, I have not attempted to solve this problem of lateral stability. In fact, the more I look into the problem the bigger it gets. I will acknowledge that I have been so busy flying that I have not had much time for the origination of ideas on stability. I am not attempting, therefore, to "supply the want" as Mr. Ernest Warde-Fox puts it. I do know, however, as a practical aviator that in my own case at least I should much prefer trusting to my own brain and muscles than to some automatic device, whether a pendulum, gyroscope, or similar mechanism.

Mr. Frank W. Hambling states that automatic stability should not be an alternate means of safety but an additional one. I have had this problem put up to me before when I have given my views on the subject.

If you are going to have an automatic device then you must rely upon it entirely. There is no use of getting a dog to keep an outlook for burglars provided you have to sit and keep a watch on the

dog. You might just as well be actually performing the necessary movement to maintain lateral stability as to keep your mind upon some automatic mechanism which is performing the task for you. Incidentally, it is impossible to give the close attention to an automatic device that you would if you were actually making the required movement yourself.

In writing my article "Automatic versus Inherent Stability" I did not mean to put even the slightest impediment in the line of progress of the solution of the most momentous problem before the aeronautic engineer of to-day—the problem of lateral stability. But I do mean to say, however, that I believe—and I think most practical aviators will agree with me—that what is wanted is *inherent stability*, and *not the dependence upon an automatic mechanism for doing what the aviator does at the present time*. I still claim that, if you took such a mechanism down to Brooklands, Eastchurch or Hendon—assuming, of course, that such a device existed—and, after you had proved conclusively to the most expert aviators that your device was everything you claimed as long as it worked—I am still of the opinion that not one of them would take it. I certainly would have nothing to do with such a mechanism; for there is no arguing the fact that, sooner or later, any mechanism is going to go wrong, and then, if you don't happen to have your mind concentrated upon the subject, the chances are you will meet your death.

Steering a modern aeroplane is a very difficult task until you try it. If a man is what is known as a "born aviator," that is, if he flies intuitively, flying is not at all a difficult operation under all ordinary conditions. For instance, last sea on I won the \$10,000 prize in the *Boston Globe's* tri-state aeroplane race, flying 186 miles across country. Most of the time I flew with only one hand on my lateral control, and was looking around the country, and enjoying the flight as much as anybody who was watching me. It was no more effort for me to steer my 70-h.p. Blériot monoplane than for me to ride a bicycle.

If inherent stability cannot be obtained, then it is time enough to turn our attention to automatic stability, but when it is a choice between the two I do not think there is room for much discussion.

I think Mr. Ernest Warde-Fox is right when he says. "In the meanwhile I and my fellow-designers will continue to concentrate our attention upon the improvement and practical evolution of the pure and simple aeroplane." If Mr. Ernest Warde-Fox concentrates upon this idea he is sure to improve the inherent stability of the aeroplane. For instance, there is no question whatever but what the non-lifting tail type of machine has far better inherent longitudinal stability than the lifting tail variety of aeroplanes.

I also agree heartily with Mr. Ernest Warde-Fox when he states that simplicity is one of the greatest things in a flying machine. What I liked about my Blériot system of control was that the wires ran straight from the control to the planes without diving into hollow spars or passing through a dozen or more pulleys. *Simplify the aeroplane of the present day, improve the little constructional details, make the factor of safety as uniform as possible, and then teach aviators that flying is not a circus performance, and aviation will come out all right in the long run.*

Newton Highlands, Mass.

EARLE L. OVINGTON.



AERONAUTICAL SOCIETY OF GREAT BRITAIN.

Official Notices.

Wilbur Wright Memorial Fund.—The following subscriptions have been received:—Amount previously acknowledged, £471 15s. 6d.; J. G. Lorrain, Esq., £1 1s.; Harris Booth, Esq., £1 1s.; W. R. Turnbull, Esq., £1 1s.; John MacHaffie, Esq., 10s. 6d.; Capt. W. J. P. Rodd, 10s. Total, £475 19s.



Models in Silver.

THERE is considerable grace and artistic merit about the lines of a well-designed aeroplane, and we can imagine no more charming way of preserving their characteristics for the information of future generations than that present-day owners should have silver replicas in miniature of the machines they fly. Such work to be carried out properly needs the art of the expert silversmith, and it is a matter of considerable interest to learn that Messrs. Mappin and Webb are specialising in this as a branch of their factory at 158-162, Oxford Street. Mappin and Webb's workmanship holds a world reputation for excellence in any case, while the reputation of the firm is such as to be a guarantee that the great essential of accuracy in the reproduction of the design should be all that the most critical constructor could desire. Already Messrs. Mappin and Webb have secured several orders, and we have not the least doubt that they will obtain quite an influx of them when the idea becomes more generally known. Most pilots naturally have a regard for their aeroplane that is a little deeper and more enduring than that ordinarily associated with the possession of inanimate objects, and we can well believe that all, at any rate, who have achieved anything of consequence in the way of a flight, would like to possess some simple memento of the occasion such as the Mappin and Webb scale model so admirably affords. These models, needless to say, can be made in any size. The larger, the greater amount of detail can be reproduced, of course; but even in the smallest models accuracy of essential features and a likeness of the original machine is equally assured.

A Remarkable Life-saving Jacket.

Now that hydro-aeroplaning is getting so popular, the need for another accessory for flying arises. This is the life-saving jacket. It would be impossible to emphasise too much the importance of wearing such an appliance when flying with an ordinary aeroplane over tracts of water, for machines designed to support themselves in air will not always support themselves indefinitely in water, unless special provisions are taken. Even with hydro-aeroplanes, sudden contact with the water might possibly so derange the floats that they would no longer give support. So it becomes evident that, as a wise precaution, the use of some form of appliance to keep the aviator afloat should he be thrown clear of the machine, or should he have to abandon it for any reason, is indispensable. Such makeshifts as an inflated inner tube or a football will not suffice. There are naturally many devices of this kind on the market, but none perhaps so suited to aeroplane use as the "Boddy" life-saving jacket, sold by the

"Boddy" Life-Saving Jacket Co., 8, Leadenhall Street, London, E.C. This garment has been so designed that it gives the wearer all the freedom of movement necessary when flying. Its buoyancy is obtained from Kapok, an extremely light and silky form of vegetable fibre, which is derived from the pods of a tree, native to India. This fibre Kapok is sewn into pockets in different positions on the jacket. The disposition of these pockets is a more important feature of the jacket than would at first be supposed, for they have been so designed by Mr. G. M.



Boddy that should the wearer become unconscious in the water, he will be turned on his back and floated into a safe position, his head being supported and kept clear of the water by a cushion, stuffed with Kapok, high up on the back of the jacket. This special vegetable fibre has the advantage over cork, that it is much lighter, and infinitely warmer to wear, and that it does not lose its flotation power through water-logging. For flying purposes the warmth that the "Boddy" jacket affords will be readily appreciated. As for its safety qualities, it is interesting to know that the jacket has been approved by the Board of Trade after a series of exhaustive tests. Several well-known aviators, wide awake to any emergency that may arise, have equipped themselves with "Boddy" jackets. They have given them, we believe, every satisfaction in use.

Compass Improvements.

GEOGRAPHIA, LTD., of 33, Strand, W.C., are just introducing a new compass, for which they claim many advantages. Chief amongst these is that it may be adjusted by the aviator himself, so that he may not be put to the expense of engaging a qualified operator to do it for him. Another advantage is that the liquid container is completely sealed, thus eliminating the possibility of air-bubbles forming inside or of liquid escaping. The third important feature is that it is provided with a device by which it may be employed for keeping on a true course when flying in a side wind. We hope to be able to give further details in a future issue.

The Transport of Aeroplanes.

MESSRS. JOSEPH C. MOUNT & CO., who make a speciality of the transport of aeroplanes, have had charge of the packing and delivery of several of the British machines to Salisbury, while several foreign machines also passed through their hands. In our last issue there was a slight slip in the advertisement of this firm. It should be noted that the telephone number of their Grosvenor Road premises is 4654, Victoria.

A Tool for Making Wire Loops.

FROM MESSRS. Rubery, Owen and Co., of Darlaston, South Staffs, we have received a little instrument which doubtless when it becomes further known will find a place in every air mechanic's kit. It consists of patent bending pliers, which render it quite unnecessary to heat wire or steel tape in order to form a loop. They are made in stamped black steel, and tests have shown that they will make a perfect loop in wire or steel tape 10 to 14 gauge in thickness. The firm will be pleased to send full particulars to anyone interested.



Aeronautical Patents Published.

Applied for in 1911.

Published August 1st, 1912.

- 15,529. J. S. STEPHENS. Aeroplanes.
19,378. O. C. JONES. Aerial propellers.
28,918. E. M. CHARPENTIER. Wooden parts for aerial navigation.

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